

VSB – TECHNICAL UNIVERSITY OF OSTRAVA
FACULTY OF ECONOMICS

DEPARTMENT OF FINANCE

Posouzení kolektivního investování v Číně a ve vybraných zemích
Assessment of Collective Investment in China and Selected Countries

Student: Bc. Biwei Guan
Supervisor of the diploma thesis: Ing. Kateřina Kořená, Ph.D.

Ostrava 2018

Diploma Thesis Assignment

Student:

Bc. Biwei Guan

Study Programme:

N6202 Economic Policy and Administration

Study Branch:

6202T010 Finance

Title:

Assessment of Collective Investment in China and Selected Countries
Posouzení kolektivního investování v Číně a ve vybraných zemích

The thesis language:

English

Description:

1. Introduction
 2. Characteristic of Collective Investment
 3. Development of Collective Investment in China
 4. Development of Collective Investment in Selected Countries
 5. Assessment of Collective Investment in China and Selected Countries
 6. Conclusion
- Bibliography
List of Abbreviations
Declaration of Utilisation of Results from the Diploma Thesis
List of Annexes
Annexes

References:

- BOGLE, John C. *Common Sense on Mutual Funds*. 10th ed. Hoboken, N. J.: Wiley, 2010. ISBN 978-0-47-0138137.
- CECCHETTI, G. Stephen and Kermi, L. SCHOENHOLTZ. *Money, Banking, and Financial Markets*. 3rd ed. New York: MacGraw-Hill, 2011. ISBN 978-0-07-122068-2.
- FABOZZI, J. Frank and Franco MODIGLIANI. *Capital Markets*. 4th ed. New Jersey: Pearson Prentice Hall, 2009. ISBN 978-0-13-715499-9.

Extent and terms of a thesis are specified in directions for its elaboration that are opened to the public on the web sites of the faculty.

Supervisor: **Ing. Kateřina Kořená, Ph.D.**

Date of issue: 24.11.2017

Date of submission: 27.04.2018



Ing. Iveta Ratmanová, Ph.D.
Head of Department

prof. Dr. Ing. Zdeněk Zmeškal
Dean

"I hereby declare that I have elaborated the entire thesis including annexes
myself."

Ostrava dated 25.04.2018

Biwei Guan 关碧薇

Student name and surname

Contents:

1 Introduction.....	6
2 Characteristic of Collective Investment.....	7
2.1 Classification of Collective Investment	7
2.2 Functions of Collective Investment	11
2.3 Development Trend of Collective Investment	15
2.4 The Risk of Collective Investment	18
2.5 Method for Assessment.....	19
3 Development of Collective Investment in China	21
3.1 Basic Information about China's Economic Environment	21
3.2 Basic Information of Development of Collective Investment in China.	23
4 Development of Collective Investment in Selected Countries.....	28
4.1 U.S. Market.....	28
4.1.1 Basic Information about U.S. Economic Environment	28
4.1.2 Basic Information about Development of Collective Investment in U.S.	30
4.2 Japanese Market	35
4.2.1 Basic Information about Japanese Economic Environment	35
4.2.2 Basic Information about Development of Collective Investment in Japan	36
4.3 European Market	41
4.3.1 Basic Information about European Economic Environment	41
4.3.2 Basic Information about Development of Collective Investment in Europe	42
4.4 Global Market.....	47
4.4.1 Basic Information about Global Economic Environment.....	47
4.4.2 Basic Information about Development of Collective Investment in Global.....	49
5 Assessment of Collective Investment in China and Selected Countries.....	52
5.1 Economic Environment	52
5.2 History of Collective Investment	54
5.3 Laws of Collective Investment.....	55

5.4 Total Size of Collective Investment	56
5.5 Structure of Collective Investment.....	57
5.6 Prediction of Collective Investment.....	58
5.7 Suggestion for Each Market.....	63
6 Conclusion	66
Bibliography	67
List of Abbreviations	69
Declaration of Utilisation of Results from the Diploma Thesis	
List of Annexes	
Annexes	

1 Introduction

The growth of resident income makes them gradually increase their desire for preservation and appreciation of their wealth, financial institutions also want to increase their business income, and thus collective investment products are born. After the emergence of the collective investment product, it has been rapidly developed due to its unique characteristics such as the transfer of risks, the sharing of benefits, and the ease of investment.

The objective of this thesis is to assess the performance of collective investment in the Chinese market and other selected markets and summarize their differences and common points. As selected markets, we have selected representative markets; they are American markets, Japanese markets, European markets, and global markets.

This thesis is divided into six chapters. Chapter 1 is the introduction, in this chapter we write the basic information about the whole thesis which including the objective and the contents.

Chapter 2 is written about characteristics of collective investment which include classification of collective investment, function of collective investment, development trend of collective investment, risk of collective investment and the method for assessment of collective investment.

Chapter 3 and chapter 4 focused on the development of collective investment in China and selected markets, they are the American market, Japanese market, European market and Global market. In these two chapter, we will write the specific information of collective investment in Chinese market and selected market.

Chapter 5 is the important part of this thesis, in this chapter we will write the assessment of collective investment in different market based on the economic environment, history, laws, total size of market, Structure, prediction, and suggestion for each market.

Chapter 6 is conclusion, in this part we will review this thesis and make the summary of the whole thesis.

2 Characteristic of Collective Investment

Collective investment refers to the pooling of funds provided by numerous small investors to form collective assets and entrusts professional investment institutions as asset managers to manage and operate them. To invest the collected funds in stocks, bonds, and other securities or other businesses, and to distribute the profits and losses in accordance with the mutually agreed benefits.

In Chinese market, collective investment products correspond to foreign investment funds, as we usually understand. Investment funds in different countries have different appellation. In China, we call it mutual funds; in The United States, based on differ regulation organization, investment funds are known as investment company, common trust fund, collective investment trust and commodity pools; in Japan, based on differ organization form, investment funds are known as investment trust, investment corporation and collective investment schemes.

As the same as the appellation of investment funds are different in every country, there doesn't exist a uniform and accurate definition of investment funds. However, they do have some common characteristics.

In this chapter, we will write the characteristics of collective investment which including their classification, function, development trend and risk, we also will write the theoretic part of the calculation methods.

2.1 Classification of Collective Investment

With the development of collective investment in the past 100 years, it has divided into different categories according to the needs of different investors and the different economic conditions in different countries.

In this part, we will introduce some different categories of collective investment based on form of organization, whether to redeem, fund investment objects, fund operational mode, type of financial services invested and fund raising and investment area. As we have mentioned before, collective investment product in China is also

known as investment funds in foreign markets, so the standard of classification is based on the standard of classification for investment funds.

The classification is shown as Table 2.1, and we will write the specific information in the following parts.

Tab. 2.1 Classification of collective investment

Standards of classification	Types of collective investment
Form of organization	Contractual type funds & Corporate type funds
Redemption	Open-end funds & Close end funds
Fund investment objects	Securities investment funds & Industrial investment funds
Fund operational mode	Fixed investment funds & Managed investment funds
Type of financial services invested	Comprehensive investment funds & Individual investment funds
Fund raising and investment area	Domestic funds & National funds & International funds & Mirror funds & Offshore funds & China-foreign cooperation funds

Source: Yong Wang (1999), Investment Funds Research, author

Form of organization

Contractual type investment funds (Yong Wang, 1999) are also known as unit trust funds, they are established by funds contracts signed between fund investors, fund managers and fund custodians. And they refer to specialized investment institutions like banks and enterprises jointly investing in the establishment of a fund management company. The fund management company as a trustee issues proceeds vouchers in the form of a "trust deed" with the entrusted party to raise funds in society idle funds.

Corporate type funds (Yong Wang, 1999) refer to the for-profit joint-stock investment companies which are set up of investors for the purpose of joint investment and invest the formed company assets in securities investment funds. The investor who

subscribes to the shares of the fund is the company's shareholder and can enjoy investment profit according to the law with his shares.

Compared with contractual type funds, the advantages of corporate type funds are that the legal relationship is clearer, and the supervisory and restraint mechanisms are relatively complete. However, contractual funds are easier to set up.

Redemption

Open-end funds (Yong Wang, 1999) are domestic and foreign mutual funds that investors trade directly to investment trust companies. Investors can buy and sell funds to fund companies on the basis of the fund's net value on each trading day. The number of units issued will increase or decrease as the investor trades. And the formula that used for calculating the units net asset value is shown as following:

$$\text{unit fund net asset value} = \frac{\text{total assets} - \text{total liabilities}}{\text{total number of fund units}} \quad (2.1)$$

Closed-end funds (Yong Wang, 1999) refer to the total amount of issuance of fund units when the fund is established. After the initial issuance reaches a predetermined issuance plan, the fund is declared to be closed and closed. Unless special approval is granted, fund units will not increase or decrease.

Fund investment objects

Securities investment funds (Yong Wang, 1999) refer to funds raised through the sale of fund shares to set up an independent fund property, which is managed by the fund manager and trusted by the fund trustee, and the securities investment is conducted by means of asset portfolios. The shareholders of fund enjoy taken risk investment tools and benefits according to their share.

The investment object of *industrial investment funds* (Yong Wang, 1999) is mainly the unlisted company. The investment maturity is usually between three years to seven years, and the purpose of investment is to promote the development of the enterprise based on the potential value of the enterprise, and to realize the capital appreciation benefit through different exit methods at the right time.

Fund operational mode

Fixed investment funds (Yong Wang, 1999) refer the trust investment funds usually invest in the predefine securities and cannot be changed in principle during the whole trust period. That doesn't allow the securities be resale or rebuy.

Managed investment funds (Yong Wang, 1999) refer fund manager has sufficient freedom of choice and disposition when manage the funds. The manager can resale and rebuy the securities or make the adjustment of the portfolio based on the market situation.

Type of financial services invested

Comprehensive investment funds (Yong Wang, 1999) refer the types of invested products can be various. It can be invested directly, or be lending, leasing, securities trading, loan financing and so on. In general, this kind of investment funds should be limited, because it can't reflect the special function and characteristics of funds.

Individual investment funds refer only make the investment on stock-funds or securities-funds.

Fund raising and investment area

Under the condition of open economy, there are three channels for investment funds to raise money. The first one is funding from domestic investors; the second one is funding from foreign investors, the last one is not only funding from domestic investors but also funding from foreign investors. Meanwhile, the capital of investment funds also has three types of investments. They are domestic markets, domestic and foreign markets, and the foreign markets which not include the funds company's home country. We can use Table 2.2 to shown them.

Tab. 2.2 Classification of investment funds

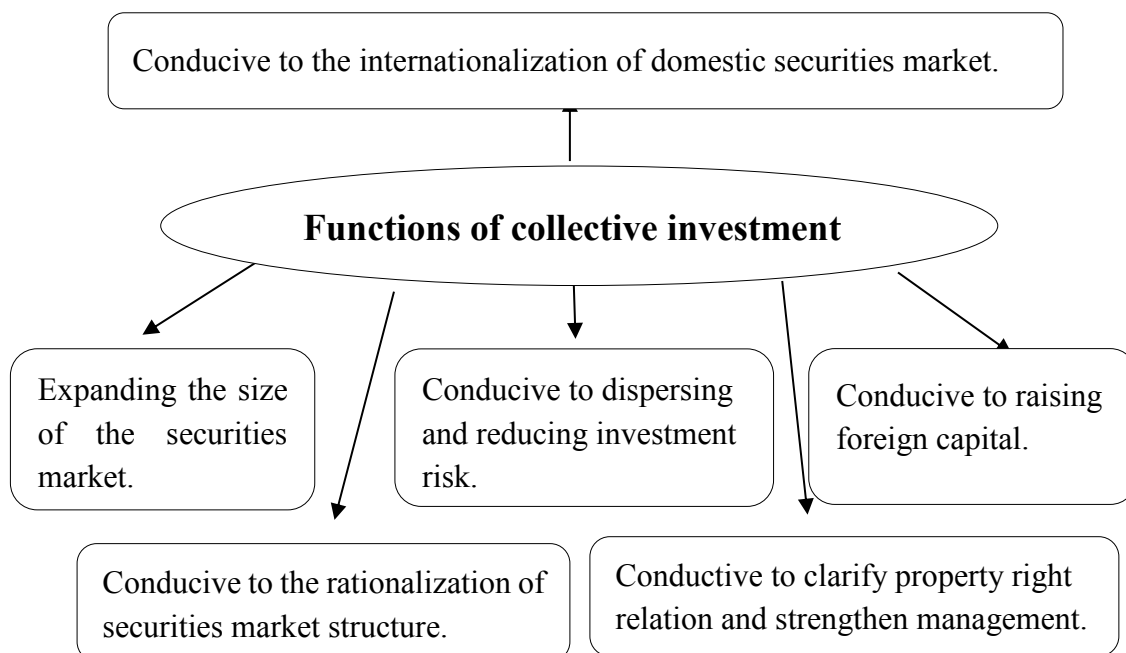
Type of funds	Raising area	Investment area
Domestic funds	Domestic	Domestic
National funds	Foreign	Domestic
International funds	Domestic	Foreign
Mirror funds	Domestic and foreign	Domestic (foreign)
Offshore funds	Foreign	Foreign
China-foreign cooperation funds	Domestic and foreign	Domestic and foreign

Source: Zei He (1999), *A Theoretical Discussion on the Development and Improvement of China's Investment Funds*

2.2 Functions of Collective Investment

The investment funds have been gradually improved in the development of over 100 years, and has been widely used in different economic environments, so it can be seen that collective investment has unique functions. In this part, we will write the main six functions of collective investments, Chart 2.1 is showing the key words of these functions.

Chart 2.1 Function of collective investment



Source: Yong Wang (1999), *Investment Funds Research*, author

Expanding the size of the securities market

Investors always afraid of losing money when doing the investment, or don't have enough capital for investing, some investors also afraid of the absent of professional knowledge of finance so don't dare doing investment. However, for the collective investment, these problems are solved.

Firstly, the investors just need to use a small scale of capital to get into this market. Therefore, the investors who absent of capital can become a small investor in collective investment market. Secondly, the capital which is raising from the investors are managed by the special fund manager company, they will invest instead of investors. As we have mentioned before, collective investment products can transfer the risk, so people who don't like risk is also willing to make the investment in this market.

For these three reasons, the *investor base is expanding* (Yong Wang, 1999), it attracted a lot of investment capital, the purchasing of stock, securities and other financial products are increasing, that is the reason why collective investment can expand the size of the securities market.

In the developed countries, such as the United States, Japan, the total scale of investment capital is usually over 20% in the whole securities market, this is meaningful for prosperity stock market to raising more capital to promote the economy and increasing more listed company.

Conducive to the rationalization of securities market structure

Collective investment as the *institutional investor* (Yong Wang, 1999), not only has a lot scale of capital, but also has lots of professional manager to carry out the specific operation. These managers have the professional knowledge about how to make the investment and they have been specially training. We have to say those managers and agent have higher investment quality and experience by comparing with other normal investors. Generally, they can do the operation under the law and requirements related to the security market that is conducive to the rationalization of securities market.

In the long-term, fund managers and agents can make a reasonable investment of the capital in the short-term, middle term and long-term, which is conducive to reduce the short-term behavior that the medium and small investors always only focus on the short-term benefits. This is partly to prevented excessive speculation and let the volatility of the stock price is not too violent, this also protect the benefits of investors indirectly.

Collective investment as the institutional investor, is convenient for the country to manage the securities market, it is conducive for the government to optimize the allocation of capital through the securities market. Not like the individual investors, as the institutional investor, it is more rational and objective.

Conducive to dispersing and reducing investment risk

Almost all the collective investment products are comprehensive. The investment portfolio can include various stocks, various bonds, or the combination of stocks, bonds and industrial investment. The risk of these stocks, bonds and industrial investment is different, and the profits of investment is usually related to the risk.

In general, higher benefits always with higher risk, but for the investors, they want to get higher benefits without high risk. The comprehensive portfolio can let the strengths and weaknesses of various investment products' venture capital complement each. Therefore, the *investment risk can be reduced and transfer* (Yong Wang, 1999), at the same time increase the income.

Conducive to clarify property right relation and strengthen management

Collective investment as the form of social economic organization who *separated by government and enterprise* (Yong Wang, 1999), it's property ownership and management rights are separated. It is an independent economic entity with independent legal personality. It's property right is clear, and it not belongs to any government department. Therefore, it can fully enjoy the right of independent decision-making. Meanwhile, in the collective investment organization, the function and

institution of operating and management have the specialization and independent characteristics, it is more conducive to strengthen management.

In addition, the using of the capital of collective investment organization is not free, the distribution of interests among investors is depends on the collective investment operating income. In order to insure the investors can get more benefits, the collective investment organization have to try their best to improve and strengthen the management.

Conducive to raising foreign capital

Through collective investment, it is possible to *attract foreign scattered* (Yong Wang, 1999), non-management ability and a variety of funds, which are not suitable for direct plant investment to participate in the country's economic construction, enjoy the benefits of its economic growth, and expand the scale of the use of foreign capital.

In addition, the foreign capital raising from collective investment is not the part of country's foreign debt, so it doesn't put the pressure of payback the foreign debt. Meanwhile, collective investment is usually not controlled, the shareholders are not participant in the domestic enterprise's management directly, so we don't need to worry about the domestic economy being controlled and intervened.

This form of using foreign capital, is being used in lots of development countries to improve their economy and relieve the pressure of absent of capital.

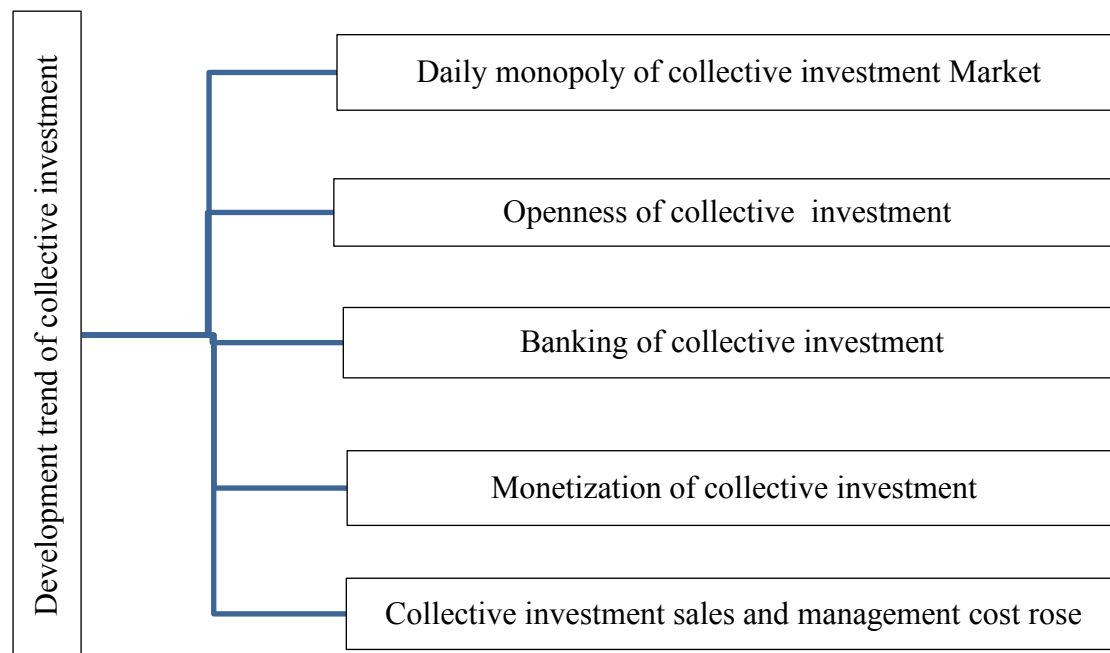
Conducive to the internationalization of domestic securities market

In recent years, there is a significant *change that the securities market becomes international* (Yong Wang, 1999). Use of collective investment can strengthen the connected of domestic and foreign banks, securities companies, and other financial institutions. They can learn from others' strong points to offset one's weakness and use the surplus domestic capital into foreign markets to get more profits. It also helps to attract the foreign capital to contribute the domestic economy and enhance the home country's function and position in the international financial field.

2.3 Development Trend of Collective Investment

Let us remind that collective investment has been set up for over 100 years, we believe that it will still exist for a long time, so it is meaningful to find out how will it develop in the following years. We make the conclusion about the trend of collective investment in the following years and make Chart 2.2 to show them.

Chart 2.2 Development trend of collective investment



Source: Yong Wang (1999), Investment Funds Research, author

Daily monopoly of collective investment Market

The development of collective investment is very quickly from 1980s until now, lots of funds management companies appeared, new investment products continue to innovate. For the whole collective investment market, the competitions between each operator is further strengthen. Those reliable property and comprehensive fund management companies stand out from the competition. Those companies get a large proportion of market shares and get the *monopoly position* (Yong Wang, 1999).

Openness of collective investment

Collective investment was born in 1868, from that time until 1930s, the most of collective investment products in the world is close-end type. However, after the

Second World War, the form that close-end funds had the dominant position was changed dramatically. From 1993, in the United States the amount of total value of close-end funds was only 900 billion dollars, but the total value of open-end funds was reach up to 18051 billion dollars. We can see it was about 20 times higher. As the same as the United States, in other countries and areas, *collective investment has open trend* (Yong Wang, 1999).

Banking of collective investment

From 1970s until now, collective investment company *focus on debt management and offer the quality services for investors* (Yong Wang, 1999). Firstly, collective investment company push out various price-orientation collective investment products based on various market, various investors and the different investors' performance in different times. Secondly, these company push out the funds that without fee. In addition, the United States collective investment company also offer consumer mortgage such as house mortgage, car mortgage and so on to customers.

Overall, collective investment company improve the abilities of manage assets and liabilities continually, and battle with traditional banks, that is the new development trend of collective investment.

Monetization of collective investment

In the end of 1970s, the oil crisis increased inflation worldwide; the market interest rate is higher than the upper limits of deposit interest rate. The commercial bank was in the very bad situation of capital competition, and capital outflows. Under this situation, the commercial banks set up negotiable certificate of deposit service, it is different from the normally deposit, it can attract capital with higher cost without the highest limit on interest rate.

Two securities dealers from Wall Street were inspired and set up the monetary market collective investment funds. They collected the small amount of capital from each depositor and made the investment in the monetary markets as the major client, they bought the short-term interest-bearing notes issued by companies, banks and

government to get the higher deposits interests. *Monetization of collective investment* (Yong Wang, 1999) is become a new development trend in the global market.

Collective investment sales and management cost rose

The most important change of collective investment in the past years was about the *cost of investment* (Yong Wang, 1999). In the whole 1960s, most of collective investment funds need to charge front-end load, the proportion is 9.3% of the amount of money in the actual collective investment funds, this expense is including commission, which is paid to securities agent.

In addition, in 1970s, only about 30% collective investment capital was hold by no-load funds which refer to funds were sold to the shareholders by issuers directly, the rest funds were charged. From the end of 1970s to the beginning of 1980s, four types of collective investment funds appeared based on different expenses, we will show the specific situation in Table 2.3.

Table 2.3 Different expenses of collective investment funds

Types of collective investment funds	Expenses
Higher commission	Front-end load or commission reach up to 6%~8.5%
Normal commission	Charging standard is about 3%~6%
Lower commission	Front-end load or commission is only 1%~3% of investment
No commission	No front-end load, but remain management fees

Source: Yong Wang (1999), Investment Funds Research, author

The first three types of collective investment funds have around 60% of the whole market shares, the rest proportion is no expenses funds. Not only the selling expenses is increased, but also the management expenses are increased as well. In 1920s, it was only about 0.5% of the whole capital, and then in 1980s, it was 0.75%~1%. Nowadays, the average management expense is around 1.3%.

2.4 The Risk of Collective Investment

Although we have written that collective investment can transfer and reduce the risk, as the investment instrument, it still has some risk. These risks can be classified into market risk and non-market risk.

Market risk

Market risk is also known as *external risk* (Yong Wang, 1999), which is caused by external factors, such as economy, political, laws and so on. We know that collective investment is a kind of indirect investment, therefor the main risk is indirect risk. In general, the risk of collective investment is lower than other investment instruments because of the characteristic of transferring of risk.

However, because the field of collective investment is larger, more factors can lead to the risk. The market risk of collective investment can't be avoided, the investors, managers and agents should take objective treatment of this matter. Purchasing risk, political economic risk and interest rate risk is also included into market risk.

Non-market risk

Non-market risk is also known as *internal risk* (Yong Wang, 1999) which refers the collective investment company's operational abilities and level of reliable, as well the experiences and talents of financial consultants, agents and investment manager. Among them, the financial risk is the risk every enterprises and institutions who issue securities will face, it was caused by the changes of financial strength rating.

If the company is going bankrupt, the price of their stocks will be decreased a lot, shareholders can't get back the principle and interest, people who hold their stocks will losing money. Companies who has better financial position can issue higher rating of securities. Generally, the risk of collective investment can be divided into three types, there are shown as following in Table 2.4.

Tab. 2.4 Risk rating of collective investment

Risk rating	Example
Low risk	Bond-funds, monetary funds
Medium risk	Blue funds, international bond-funds
High risk	Leverage funds, futures funds, certified equity funds

Source: Yong Wang (1999), Investment Funds Research, author

2.5 Method for Assessment

In this part, we will introduce regression analysis which will be used in Chapter 5 to make the analysis of the relationship between macroeconomic environment and the development of collective investment and make the prediction of the development of collective investment.

We know that the development of economy is important for collective investment industry. Because the rise and fall of collective investment industry depends on the economy. So here we will introduce some economic factors which will be used in the following chapters to judge whether the economic environment is good in the selected market, we also will choose one factor to represent the development of collective investment.

We choose gross domestic product, the inflation rate and the unemployment rate as our selected macroeconomic factors. These three factors are very representative macroeconomic factors. The gross domestic product is usually used to judge the economic health of a country; the inflation rate measures the general level of prices or the rate at which prices rise; and the unemployment rate measures macroeconomists how many people from the available pool of the labor force are unable to find job. And for the collective investment industry, we choose the total net assets value of collective investment funds as the selected factor.

Regression analysis measures the specific relationship and the relationship strength between one dependent variable and several independent variables. Regression

analysis is based on past observations of the relationship between one variable and other variables and predicts the value of an unknown variable with some degree of accuracy.

The main steps of regression analysis are: determine correlations and correlations degree between variables; establish regression models; test correlations degree between variables; and apply regression models for estimation and prediction.

The basic formula of the regression analysis model in our thesis is showing as following:

$$y_i = a_0 + a_1 * x_{1i} + a_2 * x_{2i} + a_3 * x_{3i} + e_i \quad (i=1,2,3,\dots,n) \quad (2.2)$$

where y_i is the i -th observation of the dependent variable y , here in our thesis y is total net assets value of collective investment funds; a_0 , a_1 , a_2 and a_3 are the regression coefficient; x_{1i} , x_{2i} and x_{3i} are the i -th observation of the independent variables x_1 , x_2 and x_3 , x_1 is gross domestic product, x_2 is inflation rate and x_3 is unemployment rate; e_i is the random error; n is the number of sample.

And in regression analysis model, R^2 is used to describe the degree of closeness of linear correlation between serval variables. The formulas which are used to calculate R^2 are showing as following:

$$SST = \sum(y_i - \bar{y})^2 = \sum[(\hat{y}_i - \bar{y}) + (y_i - \hat{y}_i)]^2 \quad (2.3)$$

$$SSR = \sum(\hat{y}_i - \bar{y})^2 \quad (2.4)$$

$$SSE = \sum(y_i - \hat{y}_i)^2 \quad (2.5)$$

where SST is total sum of squares; SSE is residual sum of squares; SSR is interpretable error; and \hat{y}_i is the average value of y_i .

The value of R^2 is between 0 to 1, and if the value is 1, that means it is the best fit of the model; when R^2 is between 0.9 to 1, the model is excellent; when R^2 is between 0.8 to 0.9, the model is very good; when R^2 is between 0.6 to 0.8, the model is good; and if R^2 is lower than 0.5, that means the model is bad.

We use the data analysis function in Excel to make the regression analysis, from data analysis function, we will get all the results we need. And then we can determine the regression model and make the prediction.

3 Development of Collective Investment in China

Compared with Western countries, collective investment in China does not exist long time. At the beginning, there was only a collective investment approach that incorporated scattered funds. Only in the 1990s did collective investment began to emerge in mainland China. We believe that the development of collective investment cannot be separated from the economic environment of the country where we live. Therefore, in this chapter, we will briefly introduce China's economic environment as well.

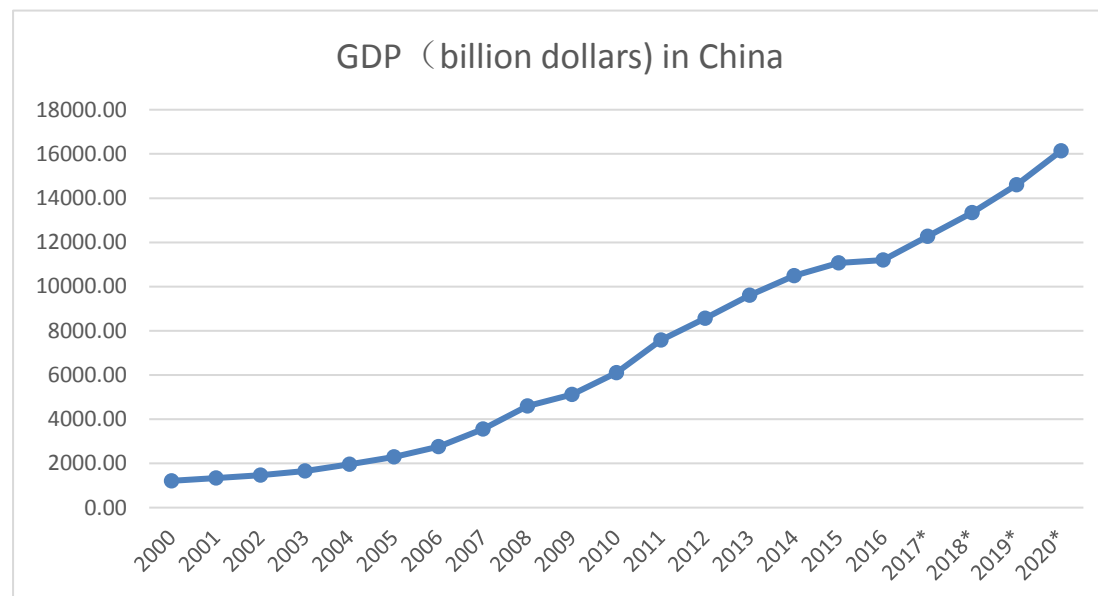
We divided this chapter into two parts, the first part is the introduction of China's economic environment, and the other part is the basic information of development of collective investment in China.

3.1 Basic Information about China's Economic Environment

As the largest developing country in the world, China has enjoyed increasing influence in the world and its economy has been growing rapidly. However, given the global economic downturn, China's economy, after experiencing rapid growth, has now entered a period of sustained growth at a moderate speed. In such an environment, signs of inflation, GDP growth rate is slowing, a few of other related economic problems follow. We will show some Charts to introduce China's economic environment more carefully.

Gross domestic product is the most important indicator of a country's economy. Gross domestic product refers to the final result of all production activities or services of all resident units of a country at market prices over a certain period of time. Here we make Chart 3.1 and Chart 3.2 to show the GDP, inflation rate and unemployment rate in China from 2000 to 2020, the data from 2017 to 2020 are used for the forecast the development of collective investment industry by using regression model in chapter 5.

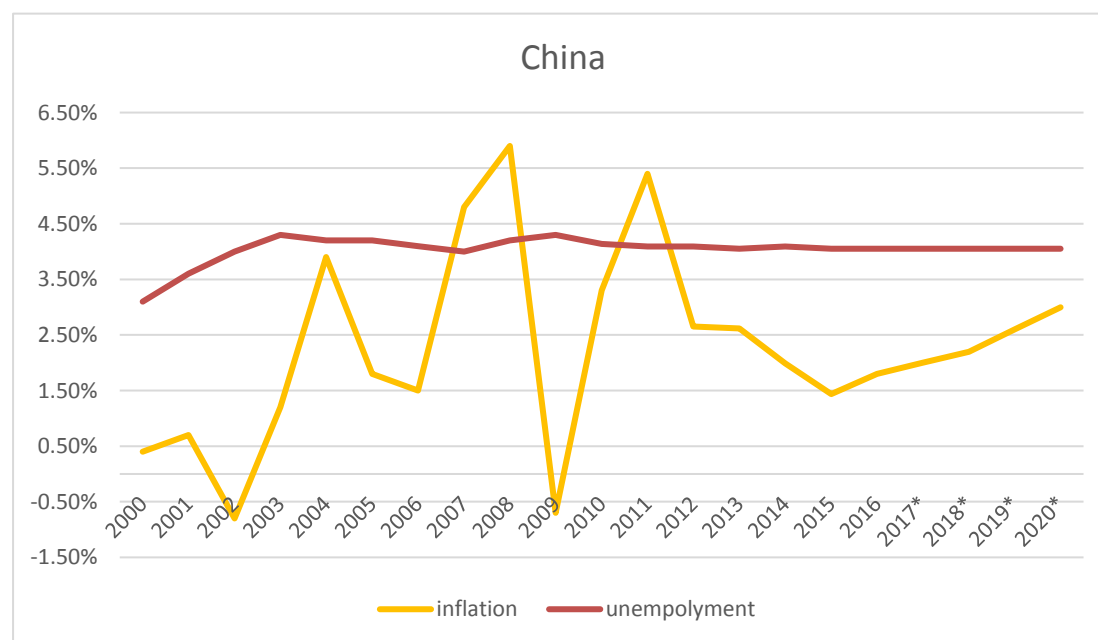
Chart 3.1 China's GDP from 2000 to 2020



Source: <https://data.worldbank.org>, author

From Chart 3.1, it is not hard to see that from 2000 till now, China's GDP has been growing. Although from 2013 to 2016, the growth speed is slower than before, it still the positive growth. And we can see the growth rate of the forecast value of the gross domestic product from 2017 to 2020 is increasing, that means GDP in China will increase in the future with higher growth rate.

Chart 3.2 Inflation rate and unemployment rate in China from 2000 to 2020



Sources: <https://www.statista.com/statistics> and <http://www.imf.org/en/data>, author

From Chart 3.2, we can find that the unemployment rate not changed a lot during the last 20 years, it was maintained at about 4% level. The normal level of unemployment is about 4% to 8%, in this case, we can write if just consider the unemployment rate, China's economy is good.

In contrast, the inflation rate has been volatile over the past 20 years. In 2008, the inflation rates up to 5.9%, by compared with the inflation rate in other years, that is really a high level. Fortunately, it was lower than 10%, and was belonged to moderate inflation. For the country who use inflation-targeting monetary policy, the inflation rate should be maintain from 2% to 3% level. China's inflation rate was at the target level after 2012 till now.

3.2 Basic Information of Development of Collective Investment in China.

In this part, we will write the basic information of development of collective investment in China, and later in chapter five, we will make some comparison of collective investment in different countries based on the information written in this part.

Collective investment is a very popular investment tool in the international market. It was imported into the Chinese market only after some time. However, with the continuous regulation of China's financial system, the collective investment in the Chinese market is developing very rapidly. It has a very positive impact on promoting the stability and prosperity of the securities market in China.

History

In general, collective investment in China's development has gone through about three stages that are shown as following in Table 3.1.

Tab. 3.1 Three stages of collective investment of China's development

Stages	Period
Germination stage	1987 to 1991
Start stage	1992 to 1993
Adjustment stage	From 1994 till now

Source: Yong Wang (1999), Investment Funds Research, author

Germination stage (Yong Wang, 1999) is from 1987 to 1991. China's collective investment was born, Bank of China and China International Trust and Investment Corporation set up the YiFu China Fund in Hong Kong. Soon afterwards, domestic financial institutions, in cooperation with overseas financial institutions, have set up a few of collective investment with China as their investment targets.

Start stage (Yong Wang, 1999) is from 1992 to 1993. This stage is really in short period, this situation is also the evidence of China's collective investment's rapid growth. During this period, a few of funds have been set up and listed. On December 28, 1992, the investment fund for township enterprises in Zibo was formally approved by the PBC Head Office and was listed on the Shanghai Stock Exchange in August 1993, making it the first standard domestic fund in China. Its establishment marked a new phase in China's co-investment.

The *adjustment stage (Yong Wang, 1999)* is from 1994 till now. As some funds suspected of illegal fund-raising, PBOC head office asked provincial banks to stop the non-standardized collective investment behavior, after which collective investment behavior is severely regulated.

Laws of collective investment in China

From 1997 until now, China has established lots of laws and requirements to regulate and supervise the collective investment market. Table 3.2 is showing these laws.

Tab. 3.2 Laws of collective investment market in China

Laws	Issue date	Main adjustment objects
Interim administrative measures for the administration of securities investment funds	1997	Administration of securities investment funds
Open securities investment fund pilot method	2000	Open securities investment fund
Measures for the management of information disclosure of securities investment funds	2004	Information disclosure of securities investment funds
Securities Investment Fund Sales Management Measures	2004	Securities Investment Fund Sales Management
Incentive measures for product innovation of securities investment fund	2008	Innovation of securities investment fund
Investment fund law	2012	Investment fund

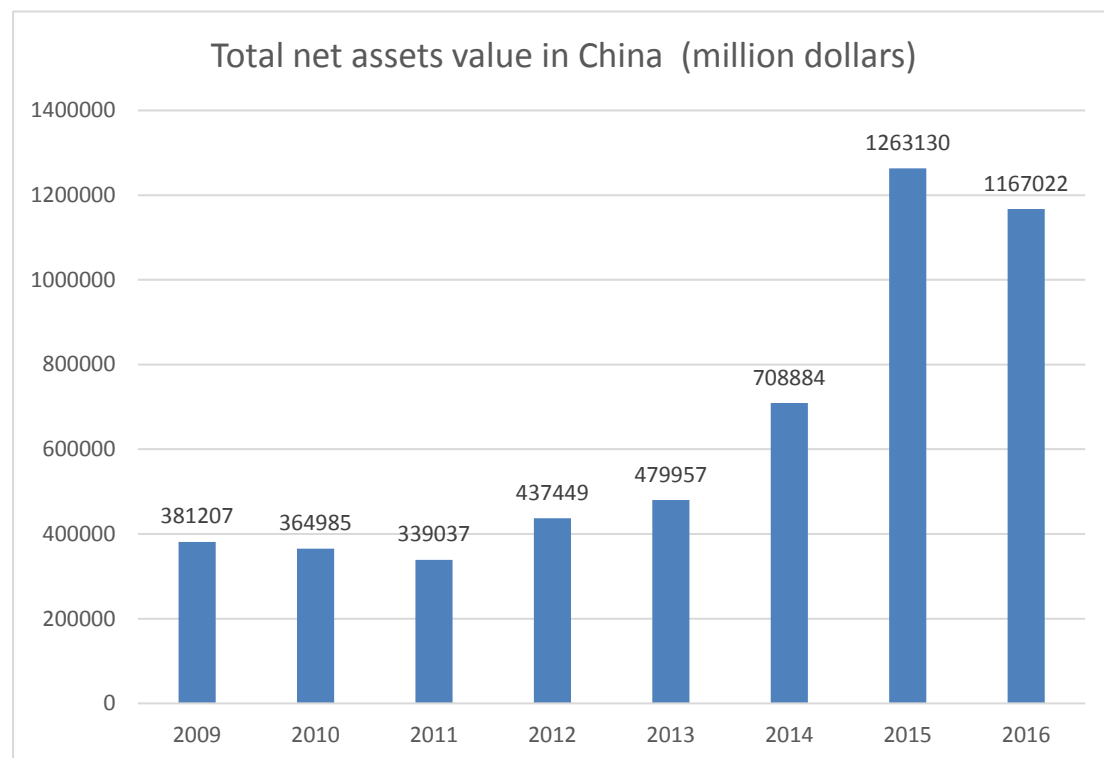
Source: *China Securities Investment Fund Annual Report 2016*, author

Total size of collective investment

In this part we introduce the total size of collective investment market in China according to the total net assets value of collective investment funds from 2009 to 2016. The related data are shown in Chart 3.3.

From Chart 3.3 we can see the net assets value of collective investment funds was decreased in the first three years and then being increased from 2012 to 2015, but later in 2016, it was decreased again. Till the end of 2016, the total net assets value of collective investment fund in China is 1167022 million dollars.

Chart 3.3 Related data about the size of collective investment market in China



Source: China Securities Investment Fund Annual Report 2016, author

Characteristics of collective investment in China

The collective investment in China is born because of the born of securities market. Differ with the development of stock market in China, collective investment is issued by local government, enterprises or financial institutions, they set up the requirements by themselves and run it independently. And then the central authority summarizes the experience, formulates laws and regulations and manages them. This characteristic of collective investment lead to the low investment efficiency.

The collective investment is a kind of mild to long-term investment product, therefore, the fund listed only in order to achieve closed-end fund liquidity requirements, its price is mainly determined by the net asset value rather than supply and demand.

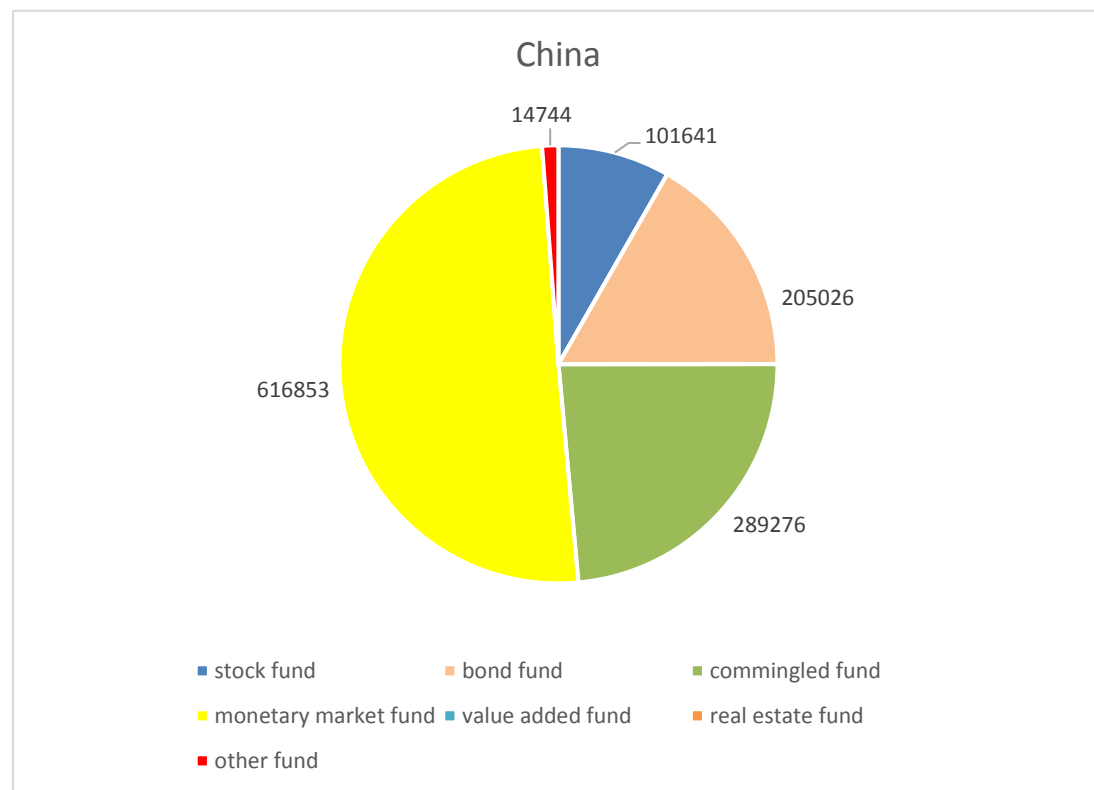
The collective investment market in China is singularity. One reason is the organization is singularity. In China, all most all the collective investment funds are contractual type fund, only a little are the corporate type fund, open-ended fund is also

a little. The other reason is that the investment market is singularity. The scale of collective investment in China is all in domestic now.

Structure of collective investment funds

We know that the collective investment funds can be classified according to the investment directions, such as stock funds, bond funds, monetary market funds and so on. Here we make Chart 3.4 to show the Structure of the collective investment funds in China in 2016.

Chart 3.4 Structure of collective investment funds in China in 2016.



Source: China Securities Investment Fund Annual Report 2016, author

From Chart 3.4 we can see that the largest type of funds of collective investment market in China is monetary market fund, it is more than 50% of the whole market, the second large type is commingled fund, it is around 25%. And we can see in Chinese market, there are no value-added fund and real estate fund in collective investment market.

4 Development of Collective Investment in Selected Countries

In this chapter, we will choose four different market as our selected countries. They are U.S. market, Japanese market, European market, and Globe market. The structure of each market is the same as China market. We will write the basic information of each markets' economy and the development of collective investment in different market.

The data period of economic variables is from 2000 to 2020, and the data from 2017 to 2020 are used for forecasting in regression analysis in chapter 5. And the data period of collective investment funds is from 2009 to 2016.

4.1 U.S. Market

Collective investment is already 70 years old in the United States after the first open ended investment fund was established in the United States in 1924. The United States collective investment fund market is very large, accounting for 47% of the global market share. Compared with the Chinese market, the U.S. market has a very long history.

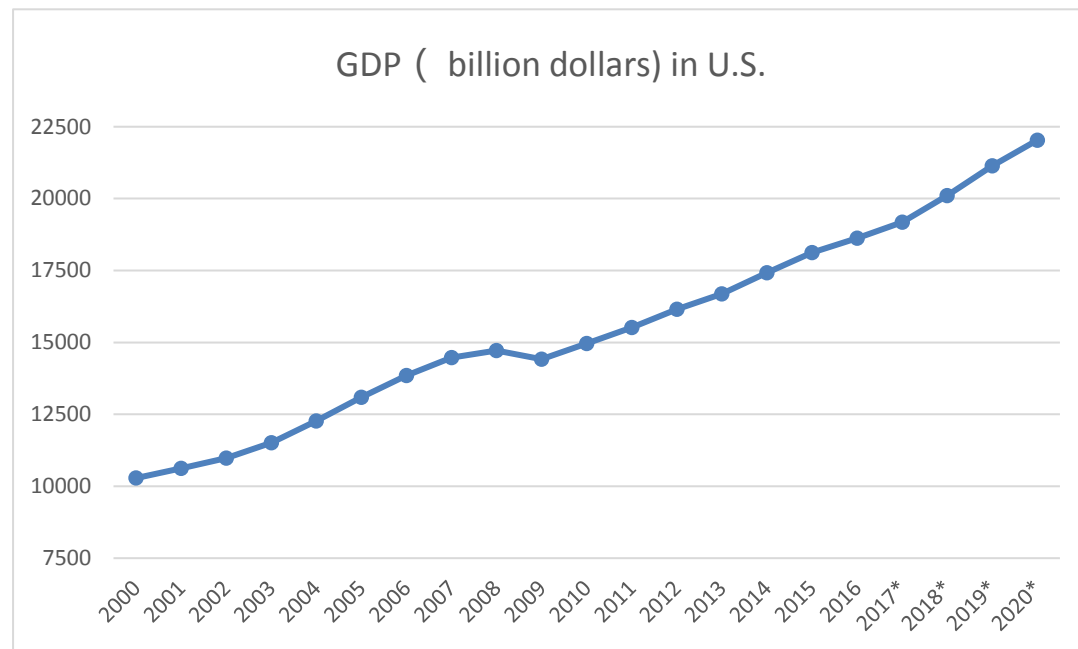
4.1.1 Basic Information about U.S. Economic Environment

As a big economic power, the United States has a very advanced modern market economy. However, due to the impact of the financial crisis, the U.S. economy has not grown as fast as it used to be.

We will describe the American economic environment by the gross domestic product, inflation rate and unemployment rate which are shown in Chart 4.1 and Chart 4.2.

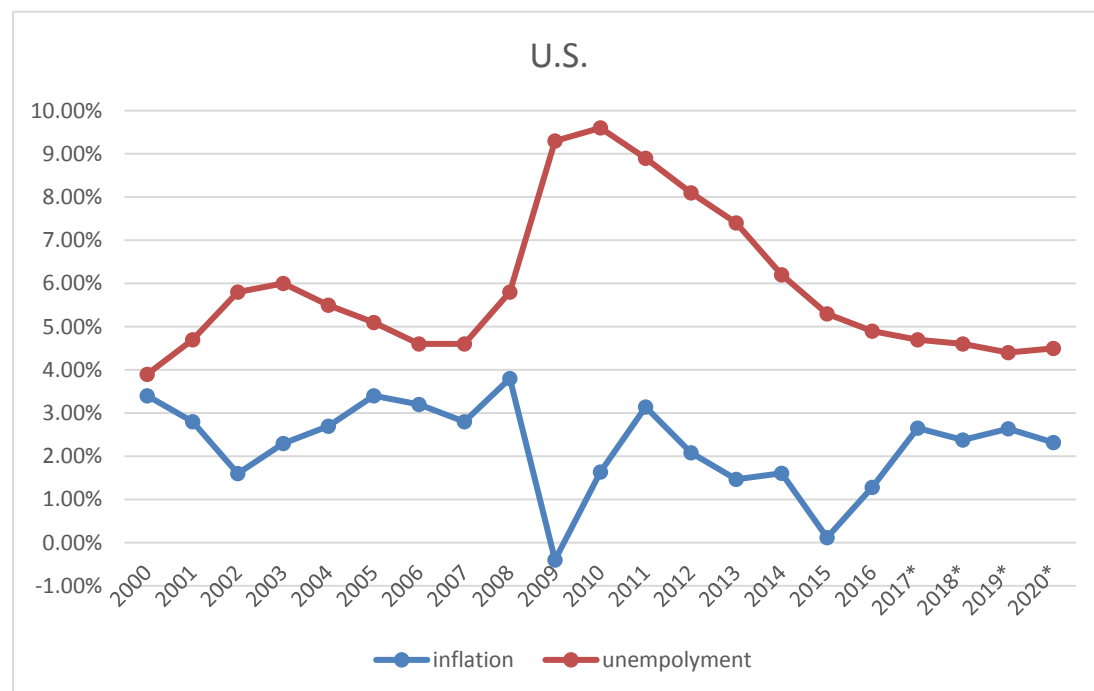
From Chart 4.1 we can see that the general trend of GDP in the United States is increasing. But there is one special time points, that is 2009. In 2009, the GDP was decreased due to the well-known financial crisis in 2008. However, in 2010 it was increased again.

Chart 4.1 GDP in U.S from 2000 to 2020



Source: <https://data.worldbank.org>, author

Chart 4.2 Inflation rate and Unemployment rate in U.S from 2000 to 2020



Sources: <https://www.statista.com/statistics> and <http://www.imf.org/en/data>, author

As we have mentioned before, the unemployment rate is supposed to be from 4% to 8% and the targeting inflation rate is from 2% to 3%. From Chart 4.2, we can find that U.S. achieve the unemployment rate goal but didn't achieve the inflation rate goal.

Although the Unemployment rate in U.S. is not higher than 10% in the past 20 years, it still a high level by compared with other countries, such as China. However, in recent years, the United States has maintained its inflation rate at a very good level. We would like to mention again this point in 2009.

We can see that the economic losses caused by the 2008 financial crisis to the United States are enormous. Other countries have indeed enjoyed no small impact. However, the impact of the United States is still the most obvious. We can see from the high unemployment rate and the deflation in 2009.

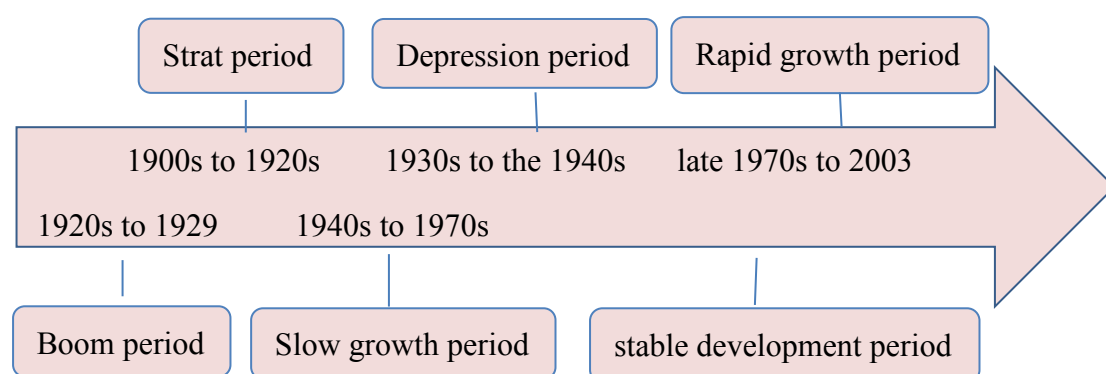
4.1.2 Basic Information about Development of Collective Investment in U.S.

The first fund in the world was the "Overseas and Colonial Government Trust" established in London in 1868. At the beginning, the types of funds are closed-end fund. Although the fund was born in Britain, its real development is in the United States.

History

There are about six periods of the development of collective investment in The United States. They are start period, boom period, depression period, slow growth period, rapid growth rate and stable development period. We make the time line for these six periods to make them clearer in Chart 4.3.

Chart 4.3 Time line of the history for collective investment in The United States



Source: Wharton class six (2010), author

The *start period* (Wharton class six, 2010) is from the turn of the 19th and 20th centuries until the early 1920s. In the late 19th and early 20th century, some investment vehicles similar like the investment trusts of England and Scotland appeared in the

United States. However, during this period, the percentage of The United States investors represented by various investment trusts was negligible, accounting for far less than 1% of the value of U.S. home financial assets.

The *boom period* (Wharton class six, 2010) is from 1920s to 1929. In the 1920s, Americans' incomes not only met consumer demand, but they also allowed the surplus to be used for investment. At that time, there are two types of investment trusts. The first is what we now call a closed-end fund. Another type of investment company that first emerged in the 1920s was an open-ended fund. Although some open-ended investment trusts had been formed before the 1920s, these trusts were not publicly issued. By 1929, only 19 open-end funds had a total asset of only 140 million U.S. dollars.

Depression period (Wharton class six, 2010) is from the 1930s to the 1940s. The Securities Act of 1933 established any rules for the public offering of securities, while the open-ended collective investment funds were under the control of the Securities Act. The Securities Exchange Act of 1934 sets out the rules for dealing in publicly traded securities. The Investment Company Act of 1940, passed by the National Assembly, formed the basis of all the specialized laws governing the supervision of the collective investment fund industry.

Slow growth period (Wharton class six, 2010) is from 1940s to the late 1970s. During this period, the United States fund industry grew slowly but steadily. Although the number of funds has been increasing, by 1980, the total number of funds has not yet reached 500. And, compared with bank savings, collective investment funds have almost no growth. Relative to the United States economy of scale, the total assets of the collective investment fund are not worth mentioning.

Rapid growth period (Wharton class six, 2010) is from the late 1970s to 2003. In the late 1970s, a series of economic factors led to the rise of interest rates to unprecedented levels, while the banking regulatory statutes stipulated that banks would pay the interest ceiling on traditional savings accounts to medium-wealth individuals.

In 1983, a total of three quarters of the collective investment fund assets were money market funds. In the 1980s and 1990s, competition prompted collective investment fund managers to shift the simple services they provided to their customers to multi-faceted products.

The *last period (Wharton class six, 2010)* is stable development period. This period is from 2003 till now. In response to the 2003 joint venture fund scandal, the "Mutual Funds Integrity and Transparency Bill" and the "Mutual Funds Reform Act 2004" were introduced in 2003 and 2004 respectively. Since then the collective investment fund industry continued to grow steadily.

Laws of collective investment in U.S

From 1940 until now, the United States has established lots of laws and requirements to regulate and supervise the collective investment market. Table 4.1 is showing these laws.

Tab. 4.1 Laws of collective investment market in U.S

Laws	Issue date	Main adjustment objects
Securities Act	1933	Securities issuance
Trust Indenture Act	1933	Trust services
Securities Exchange Act	1934	Securities exchange
Investment Company Act	1940	Company type funds
Investment Advisers Act	1940	Investment advisor company and fund management company
Securities Investor Protection Act	1990	Securities investment activities

Source: ICI Investment Company Fact Book (2016), author

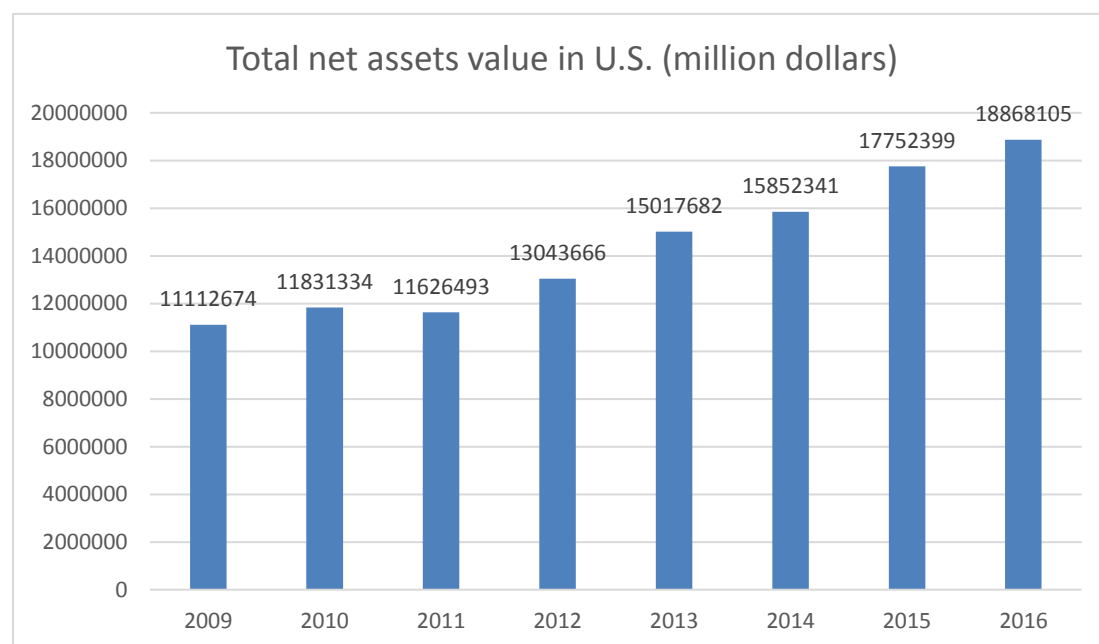
These laws are including the definition of collective investment funds in the United States, the register of investment funds, selling of investment funds, portfolio Structure of investment funds, classification of investment funds, resell and rebuy of investment funds, and so on.

Total size of collective investment in U.S.

In this part, we introduce the total size of collective investment market in the United States according to the total net assets value of collective investment funds. The related data are shown in Chart 4.4.

From 2009 till now, the main trend of American collective investment development is increased except in 2011. And we can see the American collective investment market is really a big market in the whole industry.

Chart 4.4 Total size of collective investment in the United States



Source: China Securities Investment Fund Annual Report 2016, author

Characteristics of collective investment in U.S

As the biggest and most developed collective investment market in the world, the United States collective investment industry has been in a relatively fierce competitive state.

The United States collective investment fund holders are divided into two types, they are individual investors and institutional investors. Personal investors are the largest holding group of The United States collective investment funds, especially the family.

The U.S. fund's rate structure is mainly composed of two parts: one is a one-time fee, also known as the fund holder's fee, which; the other type occurs when the investor holds the fund. The expenses mainly refer to operating expenses

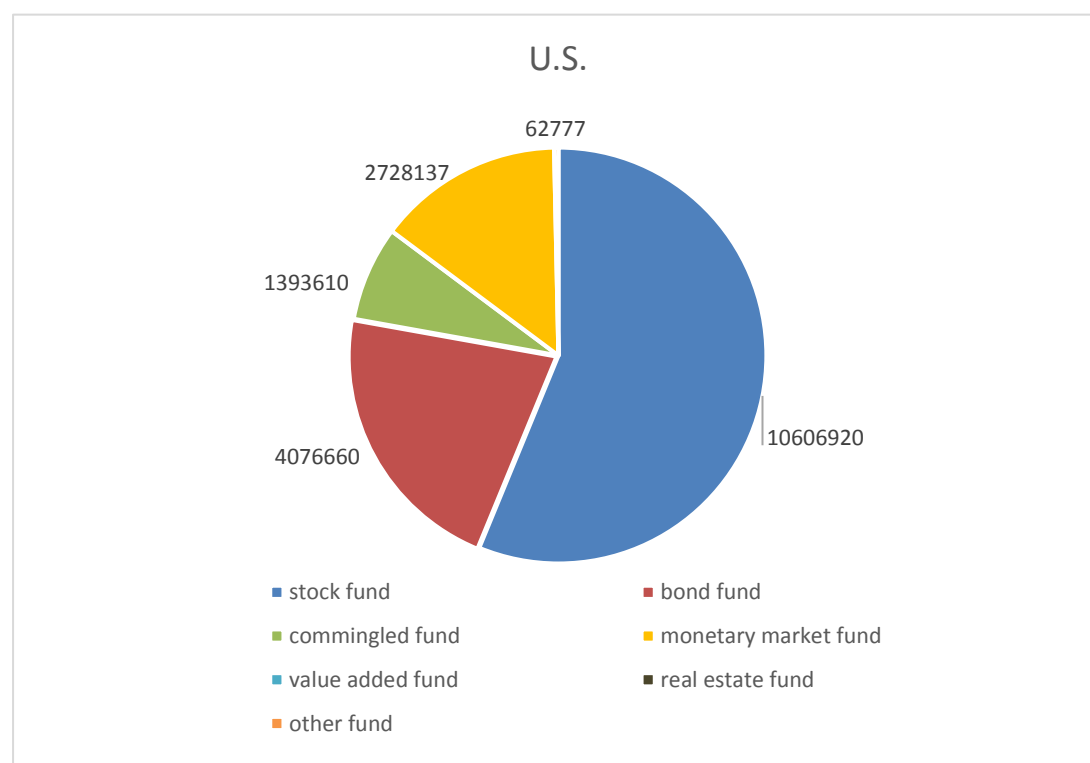
The rate structure of The United States collective investment funds is composed of two parts, they are one-time fee and operating expenses. One-time fee which also known as fund holder's fee is mainly composed of the subscription fee and the redemption fee. Operating expenses refer to the expenses occur when the investor holds the fund.

As we have mentioned before, collective investment market in the United States has really intense competition, for that, lots of new types of products are created. For example, Social Responsibility Fund, pension fund, and semi-closed fund.

Structure of collective investment funds

Here we make Chart 4.5 to show the Structure of the collective investment funds in U.S. in 2016.

Chart 4.5 Structure of collective investment funds in U.S. in 2016



Source: China Securities Investment Fund Annual Report 2016, author

From Chart 4.5 we can see that the largest type of collective investment funds in American market is stock fund, and the second one is bond fund, the smallest one is other type fund. And there is no value-added fund and real estate fund in American market.

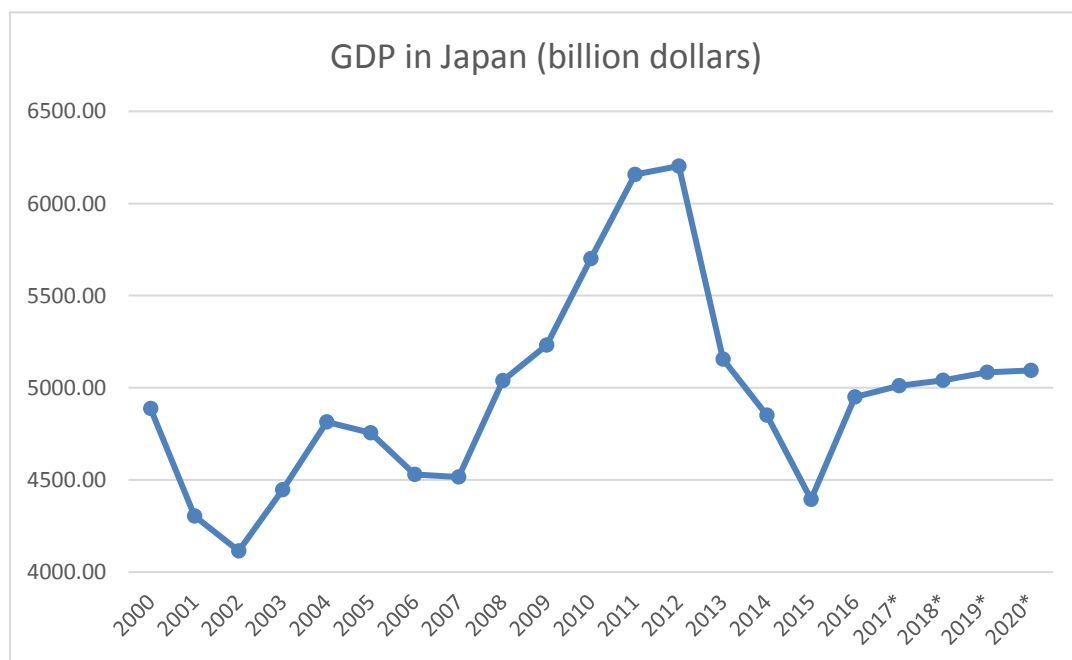
4.2 Japanese Market

The main type of collective investment fund in Japan is contractual type. And it also has a long history in Japan. In this part we will write the related information about Japanese economy environment, such as GDP annual Growth rate, and then we will write the development of collective investment in Japan.

4.2.1 Basic Information about Japanese Economic Environment

As an important economic center in Asia, Japan still faces some problems in economic. During the last 20 years, the aggregated gross domestic product in Japan was rose and fallen, and the high unemployment rate is really a big problem for Japan economic environment. Here, we will use Chart 4.6 and Chart 4.7 to show the GDP, inflation rate and unemployment rate in Japan from 2000 to 2020.

Chart 4.6 GDP in Japan from 2000 to 2020

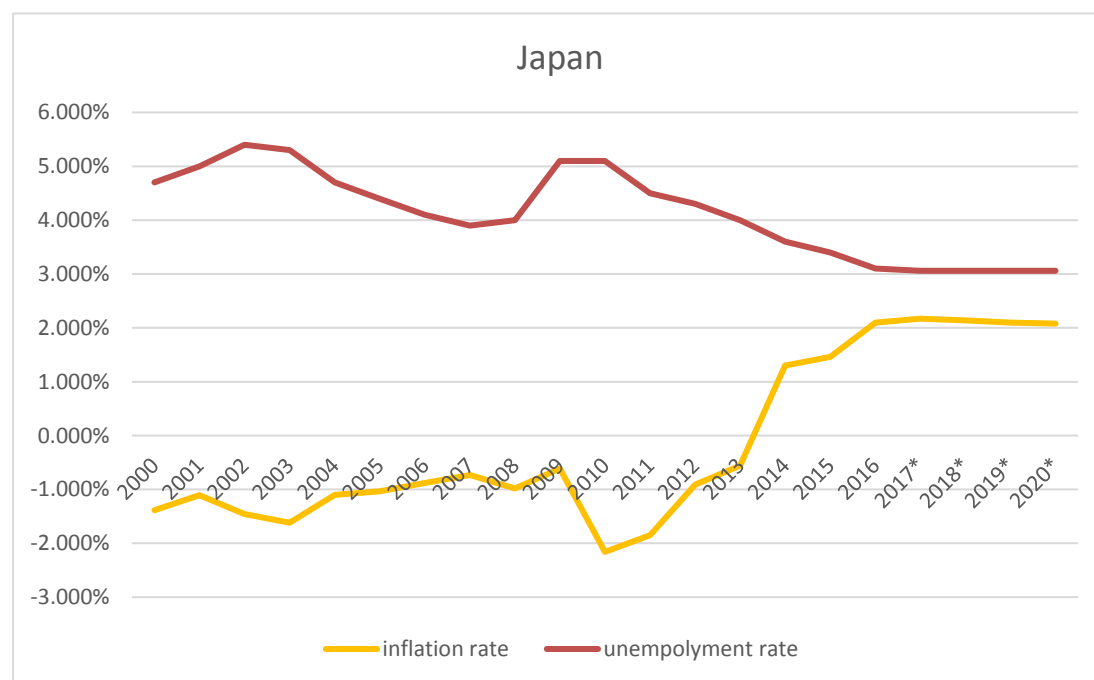


Source: <https://data.worldbank.org>, author

From this Chart we can see that there is not a clear trend of the GDP development in Japan. From the irregular trend of GDP in Japan we can write that Japanese economic is not stable during the past 16 years. And from 2011 to 2012, the GDP in Japan was decreased a lot, and being decreased continuously in the next two years. Although in the recent years, the GDP in Japan was increased, the growth rate was very small.

As we have mentioned before, the generally target inflation rate and unemployment rate is from 2% to 3% and from 4% to 8%. From this Chart we can notice Japan don't have a big problem about high inflation rate, but they get in trouble with deflation. It is very clear that from 2000 to 2013, the inflation rate in Japan was negative, that is the most different situation from China and the United States economics.

Chart 4.7 Inflation rate and unemployment rate in Japan from 2000 to 2020



Sources: <https://www.statista.com/statistics> and <http://www.imf.org/en/data>, author

4.2.2 Basic Information about Development of Collective Investment in Japan

As we have written in the chapter two, collective investment in different countries have different name. In Japan, collective investment is also known as investment trust or collective investment scheme.

History

Collective investment has a long history in Japan, and we can divide them into five periods in general. We make Table 4.2 to show that.

Tab. 4.2 History of collective investment in Japan

Time	Period
1905 ~ 1920s	Chaos operation stage
1920s ~ Before Second World War	Separate operation stage
Second World War ~ 1950s	Mixed operation stage
1950s ~ 1980s	Separate operation stage
1980s ~ till now	Freedom development stage

Source: JingLei Shi and JiSong Wang (2002), The Development of Japan's Trust Industry and Its Enlightenment to China. author

In the *chaos operation stage* (JingLei Shi and JiSong Wang, 2002), Japanese collective investment scheme was introduced from the The United States. During this period, in order to raise money for the enterprises, Japan introduce the guarantee corporate bond trust business. At the beginning, the development of collective investment in Japan had a very rapid speed, but later lots of problems were appeared because of the lack of regulation.

In the *separate operation stage* (JingLei Shi and JiSong Wang, 2002), Japanese government established trust law in order to let collective investment can have a normal development. Thanks to this law, Japanese trust industry have a clear division of labor with the banking industry to achieve business separation. At the end of 1920s, the Japan's trust industry formed its own characteristics. Some small companies were bankrupt, while the big companies who have huge capitals emerged.

In the *mixed operating stage* (JingLei Shi and JiSong Wang, 2002), because the government want to reduce the virulent inflation rate, the space of collective investment industry was limited, and faced the problems. Under the helping of the government,

these companies carried out the institutional innovation. During this period, the form of trust companies is transfer to banks or trust banks.

This stage is also called *separate stage* (JingLei Shi and JiSong Wang, 2002), in this stage, the trust industry and banking industry were separated again. And during this period, lots of new trust products were appeared. For example, the annuity trust (1965), residential loan trust (1973) and so on.

The last stage is *freedom development stage* (JingLei Shi and JiSong Wang, 2002). During this stage, the commercial banks also add trust services in their business to change their situation. Especially after 1997, Japan carries out financial reforms with the target of liberalization and internationalization. The limits between short-term and long-term borrowing is relaxed, banks are allowed to operate trust.

Laws of collective investment in Japan

From the laws of collective investment market in Japan, we can see how this industry develop. These laws have set up the requirements about the portfolio structure of investment products, the main objectives of investment trusts association of Japan, the operation and management of the investment funds and so on. We make Table 4.3 to shown them.

Tab. 4.3 Laws of collective investment in Japan

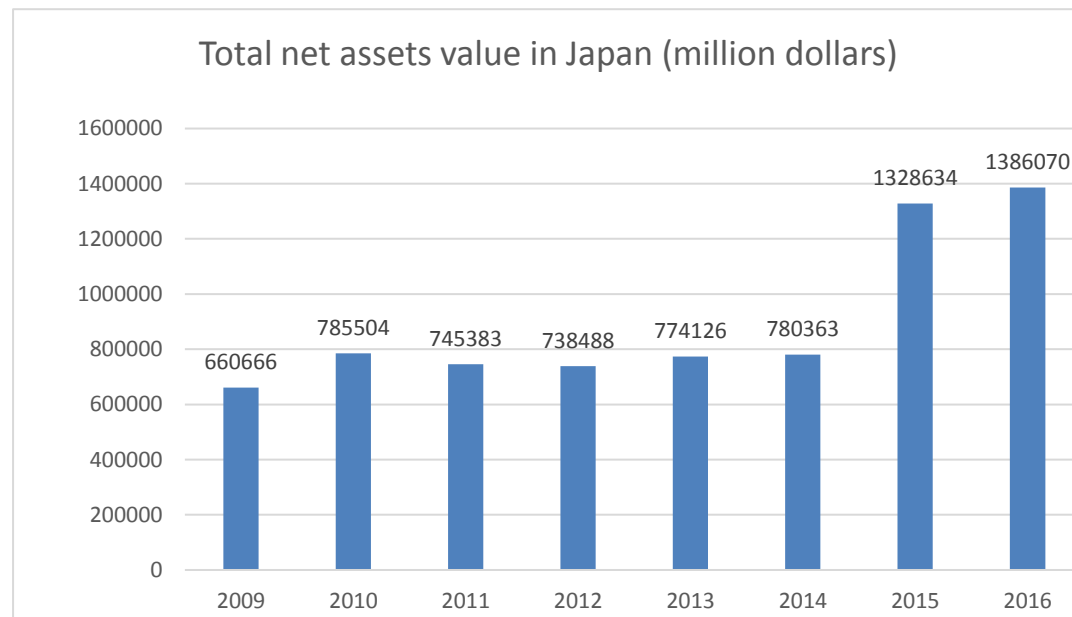
Laws	Issue date	Main adjustment objects
Trust Law	1922	Trust services
Trust Business Law	1922	Trust institutions and industry
Securities Exchange Act	1948	Securities issue and exchange
Securities investment trust Law	1951	Company-type funds
Securities Investment Advisory Business Management Law	1986	Investment advisory business

Source: JingLei Shi and JiSong Wang (2002), The Development of Japan's Trust Industry and Its Enlightenment to China. author

Total size of collective investment

Here we introduce the total size of collective investment market in Japan based on the total net assets of collective investment funds. The related data are shown in Chart 4.8.

Chart 4.8 Related data about the size of collective investment market in Japan



Source: China Securities Investment Fund Annual Report 2016, author

We can see the total net asset value of collective investment in Japan from 2009 to 2016 was almost stable it was around 750000 million dollars. And in 2015 and 2016, it was increased a lot.

Characteristics of collective investment in Japan

Japanese trust banking business can be divided into three parts, they are trust business, part-time business and banking services.

Trust business is also known as inherent industry business. And it can be divided into two parts: money trusts and non-money trusts. There are fifteen items in trust business, such as property formation grant fund trust, guarantee company trust, securities trust, securities investment trust and so on.

The part-time business of the trust companies is usually including real estate sales, leasing media, securities agency business, safekeeping and leasing of sales, dividend and bonus distribution, and so on.

For the banking business of trust company, they are just the same as the traditional banking business, like domestic exchanges, international transactions, deposits and loans and so on.

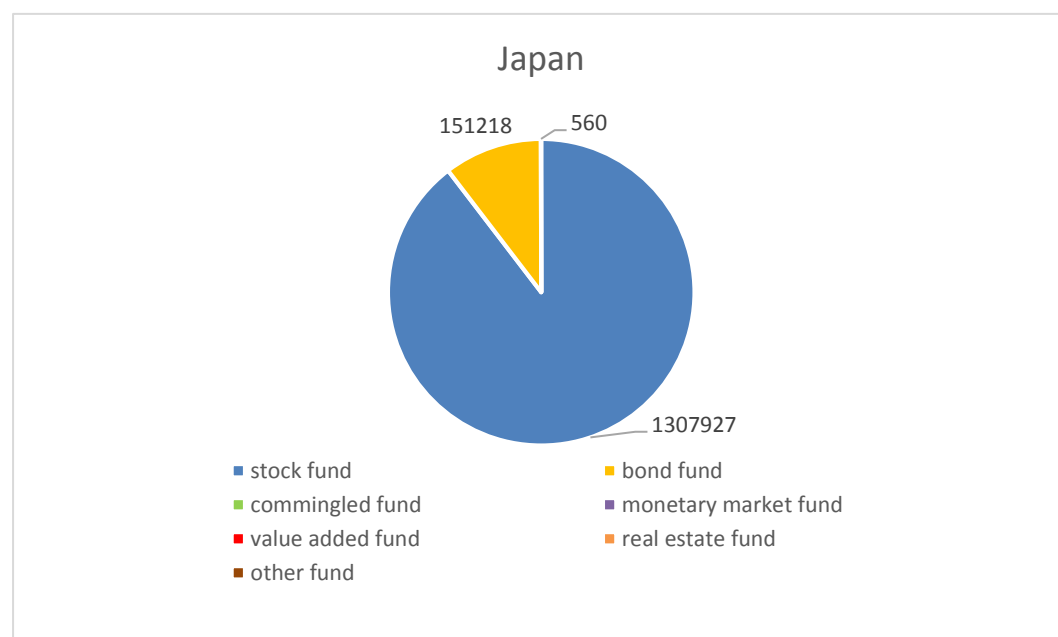
The regulation of trust industry in Japan is concentrate. The two main contents of regulation are check whether the trust organization strictly complies with different laws and regulations or not and prevent the trust industry has no negative influence on the economy as a whole.

Structure of collective investment funds

In this part, we make Chart 4.9 to show the Structure of the collective investment funds in Japan in 2016.

We can see that there only three types of collective investment funds in Japanese market, the largest one is stock fund, and the second one is bond fund, commingled fund is just a little. The stock fund is more than 75% in the whole market.

Chart 4.9 Structure of collective investment funds in Japan in 2016



Source: China Securities Investment Fund Annual Report 2016, author

4.3 European Market

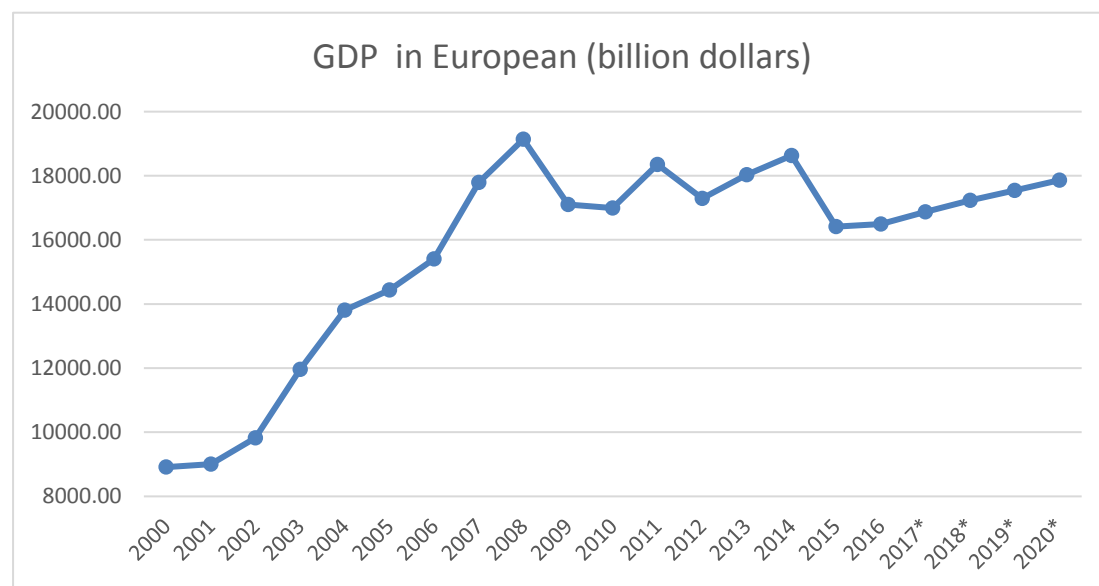
As the second biggest collective investment market in the world, European market really has a quickly speed of development of collective investment in the last 10 years. Especially from 2000 to 2007, the total size of collective investment was more than doubled.

And here in our thesis the Europe market includes these countries: Austria, Belgium, Bulgaria, Czech Republic, Denmark, German, the United Kingdom, France, Italy and so on. The specific list of countries will be written in the appendix.

4.3.1 Basic Information about European Economic Environment

European economy has an important position in the world. However, if compare with the United States, there exist more limits for Europe. These limitations are manifested in three aspects: production growth, economic competitiveness and model attraction. Here, we will use Chart 4.10 and Chart 4.11 to show the GDP, inflation rate and unemployment rate in Europe from 2000 to 2020.

Chart 4.10 European GDP from 2000 to 2020

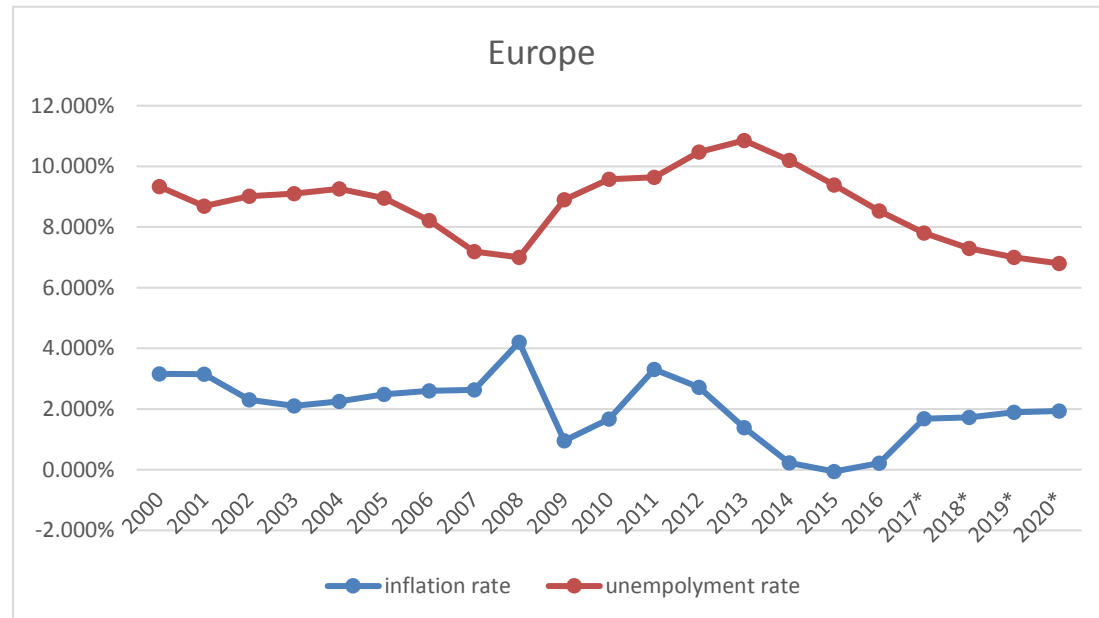


Source: <https://data.worldbank.org>, author

From Chart 4.10 we can see that before 2008, European had a good growth of GDP, but after the financial crisis, the growth rate was really lower than before. In 2009,

the GDP was decreased. From 2014 to 2016, European economic was recovered a lot. Although the growth speed is slow, it always stable.

Chart 4.11 Inflation rate and unemployment rate in Europe from 2000 to 2020



Sources: <https://www.statista.com/statistics> and <http://www.imf.org/en/data>, author

There is a big problem for European, that is the high unemployment rate during the last 16 years. The lowest unemployment rate was 7.006% in 2007, and the highest one was 10.855% in 2013. The only good situation is that the inflation rate in Europe is keep in a good level.

4.3.2 Basic Information about Development of Collective Investment in Europe

European collective investment due to their unique political factors and the limitation of geographical, it has shorter development than the United States and Japan. However, with the completion of the series of European Union laws and the establishment of regulation system, collective investment in Europe had a rapid development after 2000.

History

We can divide the history of collective investment in Europe into four stages, we make Table 4.4 to show the development history of collective investment in Europe and the four stages.

Tab. 4.4 Four stages of collective investment development in Europe

Time	Stage	Main contents
1868-1878	Origin	Overseas colonial government trust fund was established in the United Kingdom in 1868, it was the first investment trust in the world;
		The inter-American investment trust in Scotland was established in 1873, it was the first collective investment fund established by the professional organization in the world.
1879-1943	Beginning	In 1879, the United Kingdom applied the limited company law to collective investment funds, that was the sign of the collective investment funds were moving toward the era of professional management of joint-stock companies;
		In 1931, the first fund with the embryonic form of the modern open-end fund emerged;
		In 1934, the foreign government bond trust was established in the United Kingdom, that was the sign of mature development of collective investment in Europe.
1944-1990	Repaid developing	The development of collective investment in Europe was very rapid, especially the France market and Luxembourg market, the total scale of collective investment funds is large than all the market except the United States market.
1990-now	Stable developing	Multinational monopoly companies, such as strategic alliances, have become an important form of corporate production organization and management;
		There was a global investment trend and a convenient and effective international investment channel.

Source: XueFeng Wei (2012), Research on the influencing factors of the development of European mutual fund industry, author

The first collective investment company in the world was established in the United Kingdom in 1868. The first collective investment fund is “overseas colonial government trust fund”, it collected lots of small amount of capital in the United Kingdom, and then used this capital to buy overseas colonial securities. The total investment value at that time was reach up to 480 thousand pounds. From 1870 to 1930, there were about 200 collective investment fund management companies were established in the United Kingdom. And in 1934, the United Kingdom established The Foreign Government Bond Trust, that refer the mature collective investment funds was developing.

Laws of collective investment

Here we will introduce that main five laws of collective investment market in Europe and make Table 4.5 to show them.

Tab. 4.5 Laws of collective investment in Europe

Laws	Issue date	Main adjustment objects
Council Direction 85/611/EEC	1985	Undertakings for Collective Investment in Transferable Securities
Commission Decision 2001/527/EC	2001	Established of Committee of European Securities Regulators
Directive 2001/171/EC (product)	2002	Investment of UCITS
Directive 2001/171/EC (company)	2002	UCITS funds management company
Commission Recommendation 2004/383/EC	2004	The investment target of UCITS

Source: XueFeng Wei (2012), Research on the influencing factors of the development of European mutual fund industry, author

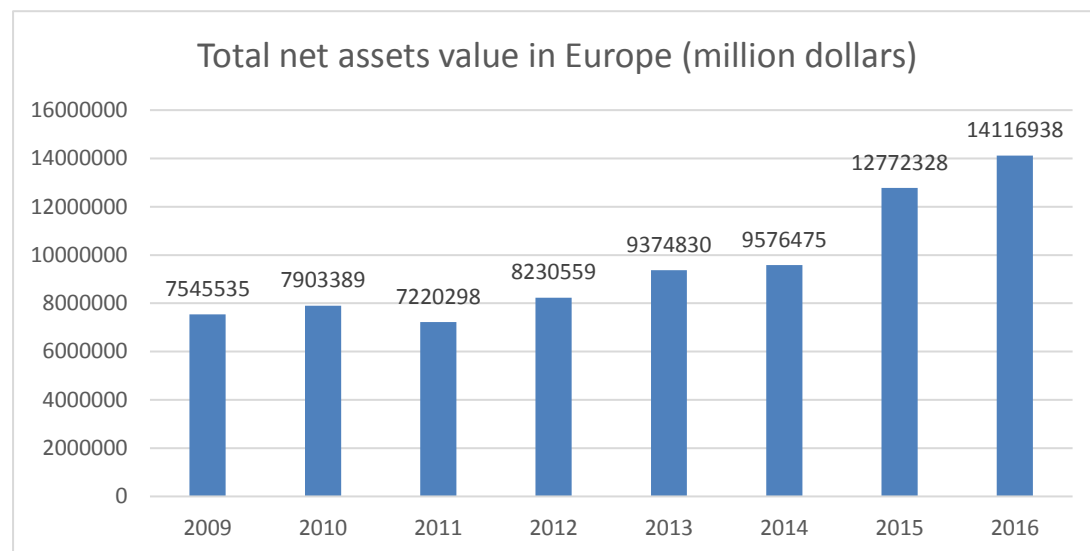
Total size of collective investment market in Europe

From 2000 to 2007, the collective investment funds management assets scale was expansion from 33000 billion dollars to 89000 billion dollars, the annual growth rate

was reach up to 15%, that was the highest growth rate during the same period in the global market. The growth rate of the United States market and Global market was 8.1% and 11.9% at the same time.

Nowadays, the scale of total net assets value of collective investment funds in European market is 32% of the whole world, and it is 58% of the United States collective investment market.

Chart 4.12 Net assets of European collective investment funds from 2003 to 2013



Source: China Securities Investment Fund Annual Report 2016, author

From Chart 4.12, we can see the total net assets value of European collective investment funds in 2016 was the highest, it was 14116938 million Dollars. And from 2010 to 2011, the total net asset value was decreased. Later it was increasing continuously.

Characteristics of collective investment in Europe

Although the scale of collective investment in Europe is not the biggest, the total number of collective investment funds are much higher than other countries. Reflecting the small scale and variety if features of the funds. In Europe, the two countries who have biggest collective investment funds scale are Luxembourg and Ireland.

The traditional investment and financing system in Europe is bank-oriented. Therefor lots of traditional funds companies rely on the bank to establish their

investment management model. Although Europe is always as a unified economy in the world, because of the difficulties on languages and culture, regional economic systems rely on regional banks. For that, the selling channel of collective investment funds heavily depend on the banking channel.

Following the pace of European market integration, the European collective investment funds industry is no longer targeting only the domestic market, but more and more transnational operation. Although European collective investment funds industry is transnational-orient now, several countries' unique funds management is still the mainstream of the market.

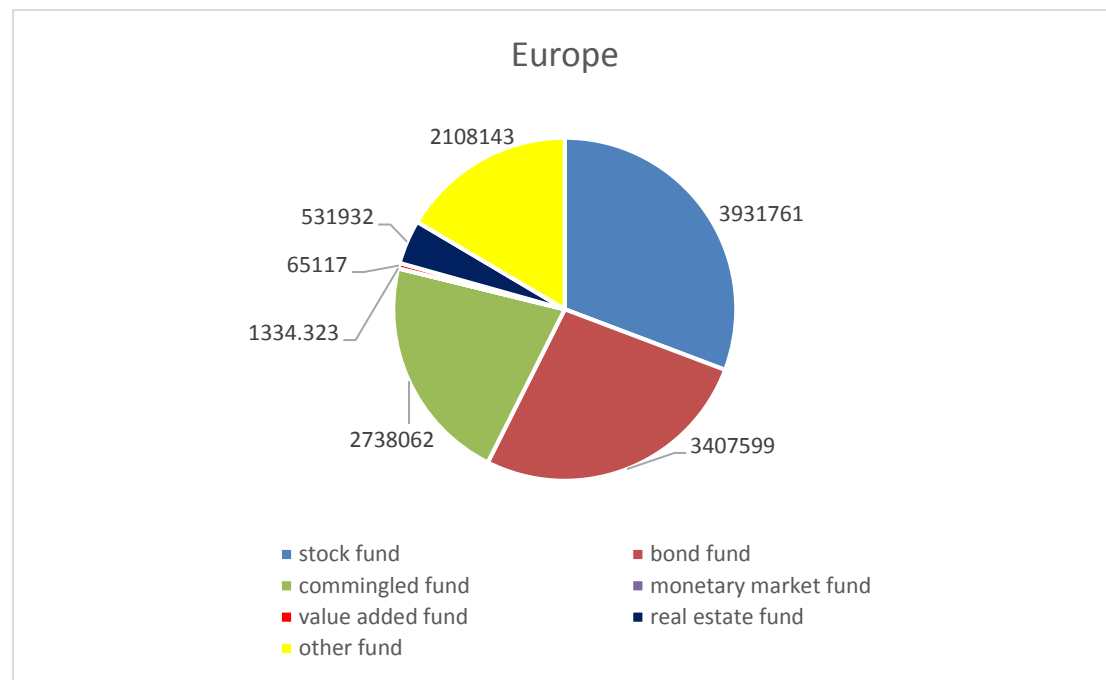
For example, the United Kingdom still take individual investors and insurance capital as the main resources for funds capital. By contrast, the capital resources of Germany collective investment funds industry are from banking industry. Italy has the similar situation with German, but a part of collective investment funds capital is from individual investors. For France, the main type of collective investment funds is monetary funds, and the capital is from institution investors.

Structure of collective investment funds

We make Chart 4.13 to show the Structure of collective investment funds in Europe market based on the investment direction.

We can see there are six types of funds in European collective investment market. Stock fund, bond fund, commingled fund and other type fund all have big proportion of the whole market. And the real estate fund and value-added fund are just a little part of the market.

Chart 4.13 Structure of collective investment funds in Europe in 2016



Source: *China Securities Investment Fund Annual Report 2016*, author

4.4 Global Market

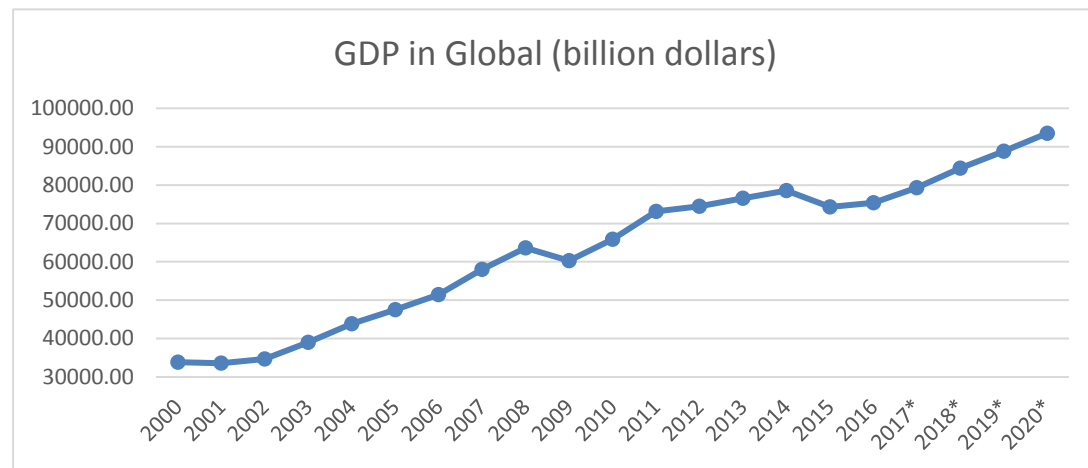
Due to the stock market boom, high investment returns, and increasing of net fund sales, global collective investment funds have achieved rapid development. In line with the unbalanced development of the world economy and the securities market, global collective investment funds also show unbalanced characteristics in regional development and fund products.

Here the Global market includes all the individual markets who has the collective investment industry.

4.4.1 Basic Information about Global Economic Environment

In 2016, the weak growth of world economy did not fundamentally improve, and the growth rate of global trade will still be at a relatively low level. At present, the world economy is still in a period of deep adjustment after the 2008 financial crisis, and low-speed growth will continue for several years. We make Chart 4.14 and Chart 4.15 to show the GDP, inflation rate and unemployment rate of the Global market from 2000 to 2020.

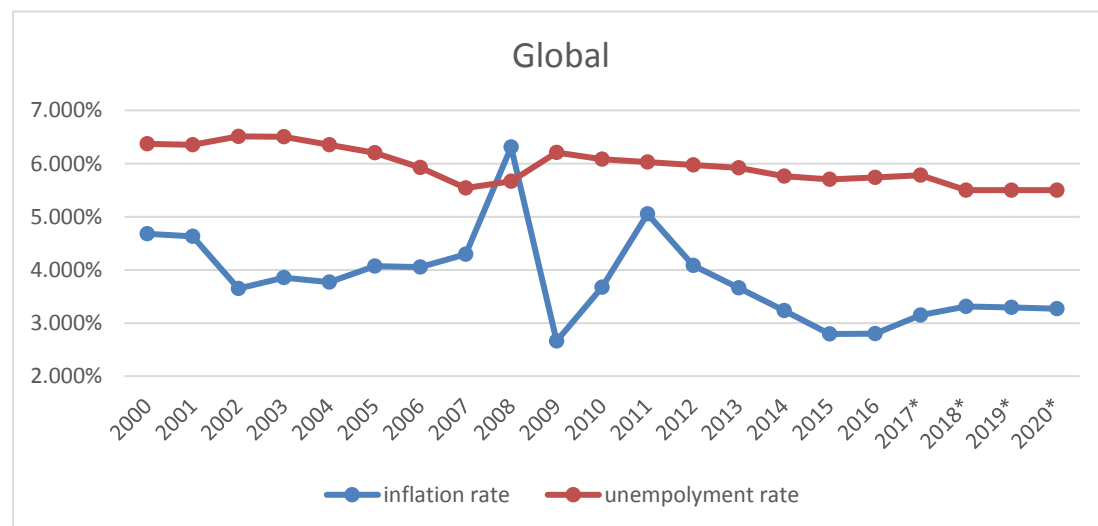
Chart 4.14 GDP in Global from 2000 to 2020



Source: <https://data.worldbank.org>, author

From Chart 4.14, we can see from 2008 to 2009 and from 2014 to 2015, the GDP was decreased. And during the other period, it was increased. And we can see that the growth speed from 2000 to 2002 and from 2011 to 2014 was not very high. In recent years, GDP in the Global market was increased with stable growth rate.

Chart 4.15 Inflation rate and unemployment rate in Global from 2000 to 2020



Sources: <https://data.worldbank.org>, author

The unemployment rate in the global market didn't have a big change during the last 16 years, it was always around 6%. The inflation rate in 2008 was really high and reach up to 8.954%, that was one of the reason that cause the financial crisis in 2008. In recent, the inflation rate was decreased and lower than 2%.

4.4.2 Basic Information about Development of Collective Investment in Global

Collective investment fund is the inevitable outcome of the development of securities market. The biggest collective investment market is the The United States market, and European Market is the second biggest one.

History

For the global collective investment market, there are three stages of the development history. We make Table. 4.6 to show them.

Tab. 4.6 Three stages of collective investment history in Global

Time	Stage	Main contents	Characteristics
1860s-1900s	Established stage	The first collective investment fund was established in U.K in 1868	Small number and scale; wide varieties; concentrated in the developed countries
1900s-1960s	Primary development stage	The first open-end fund was established in U.S. in 1924; Investment Company Law was issued by U.S. in 1940	Close-end funds had big advantages in the early stage
1960s-now	Rapid development stage	The monetary fund was established in 1971; developing countries began to focus on funds.	Rapid developing speed; large number of funds; larger market scale

Source: International Investment Fund Research, author

Laws of collective investment

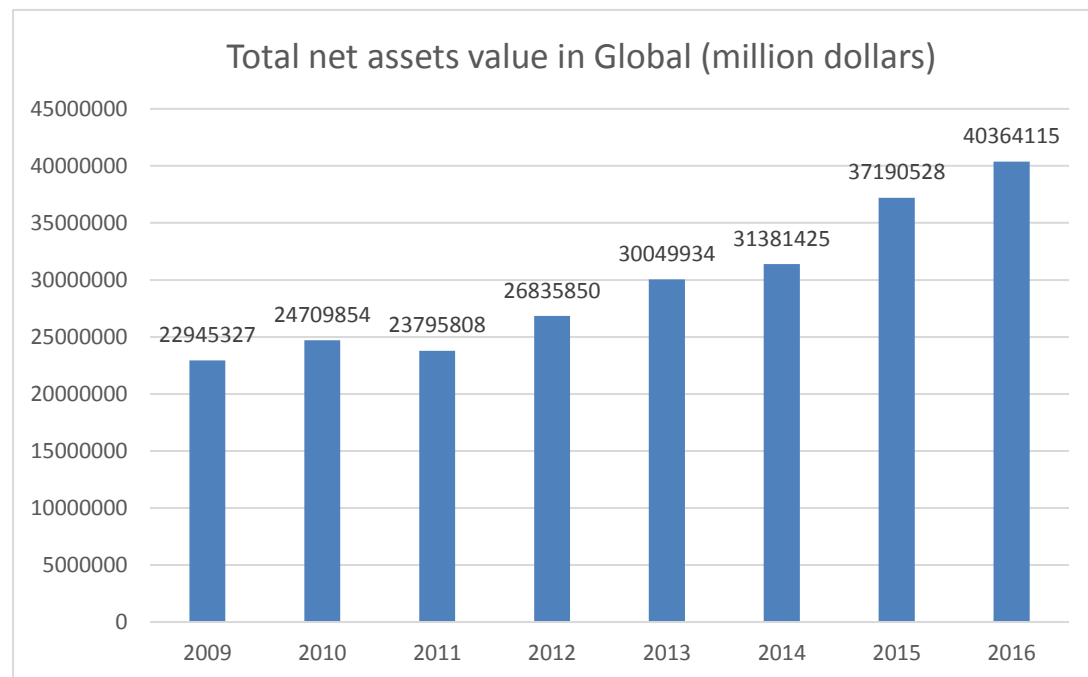
There are no specific laws can be used in all the countries in the Global market, therefor we don't introduce any laws in the Global collective investment market.

Total size of collective investment in Global market

We make Chart 4.16 to show the total net assets value of funds in Global market from 2009 to 2016.

From Chart 4.16 we can see the total net asset value of collective investment funds in the Global market was decreased in 2011 and was increased in the rest years. Till the end of 2016, the total net asset value of collective investment funds was 40364115 million dollars.

Chart 4.16 Related data about the size of collective investment market in worldwide



Source: China Securities Investment Fund Annual Report 2016, author

Characteristics of collective investment in Global

In the Global market, the United States has the most important position, the rest countries are developing rapidly. The United States has more than 50% market shares in the whole collective investment industry.

After 1980s, with the rapid development of the Global economy, lots of new collective investment funds were created. The rich variety of funds play an important role in improving the development of collective investment industry. At the same time, the open-end funds have the quickest speed of developing.

At the early stage of development of collective investment, the main capital resource was the individual investors, but now the institution investors' proportion is

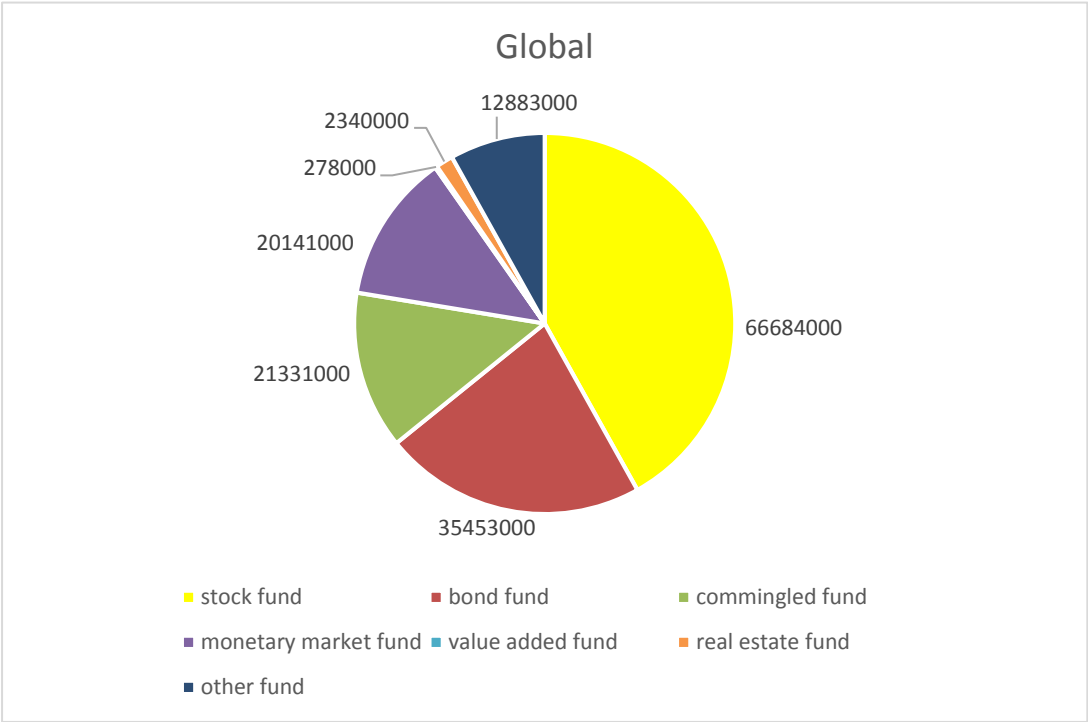
gradually increasing, and become the main capital resource of collective investment industry.

Nowadays, the collective investment is not only concentrate on the domestic market, but also focus on the international market. The integration of Global collective investment market is strengthening.

Structure of collective investment funds

In this part, we make Chart 4.17 to show the Structure of collective investment funds in Global market according to the investment directions.

Chart 4.17 Structure of collective investment funds in Global in 2016



Source: China Securities Investment Fund Annual Report 2016, author

From Chart 4.17 we can see that the largest type of collective investment funds is stock fund, and the smallest one is value-added fund. Stock fund is around 45% of the whole market, and bond fund is about 25% of the whole market.

5 Assessment of Collective Investment in China and Selected Countries

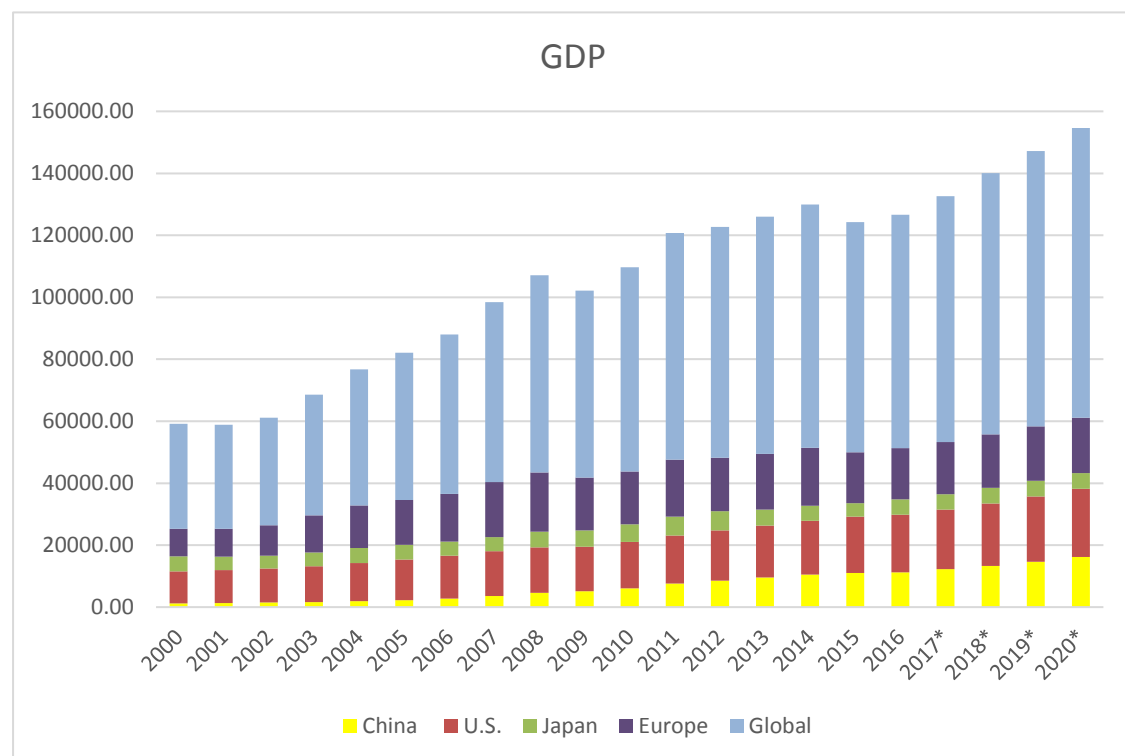
In this chapter, we will make the comparison of the collective investment in Chinese market, American Market, Japanese market, European market and the Global market according to the economic environment in the market, the collective investment's history, laws, total size and Structure.

Then we will use the regression model from chapter 4 to make the prediction of the development of collective investment in the selected markets. After that we will write the problems and suggestion for each market.

5.1 Economic Environment

In this part, we make the comparison of the economic environment of each market based on the behaviors of gross domestic product, the inflation rate and the unemployment rate. We use Chart 5.1, Chart 5.2 and Chart 5.3 to show the results.

Chart 5.1 Gross domestic product for each market from 2000 to 2020

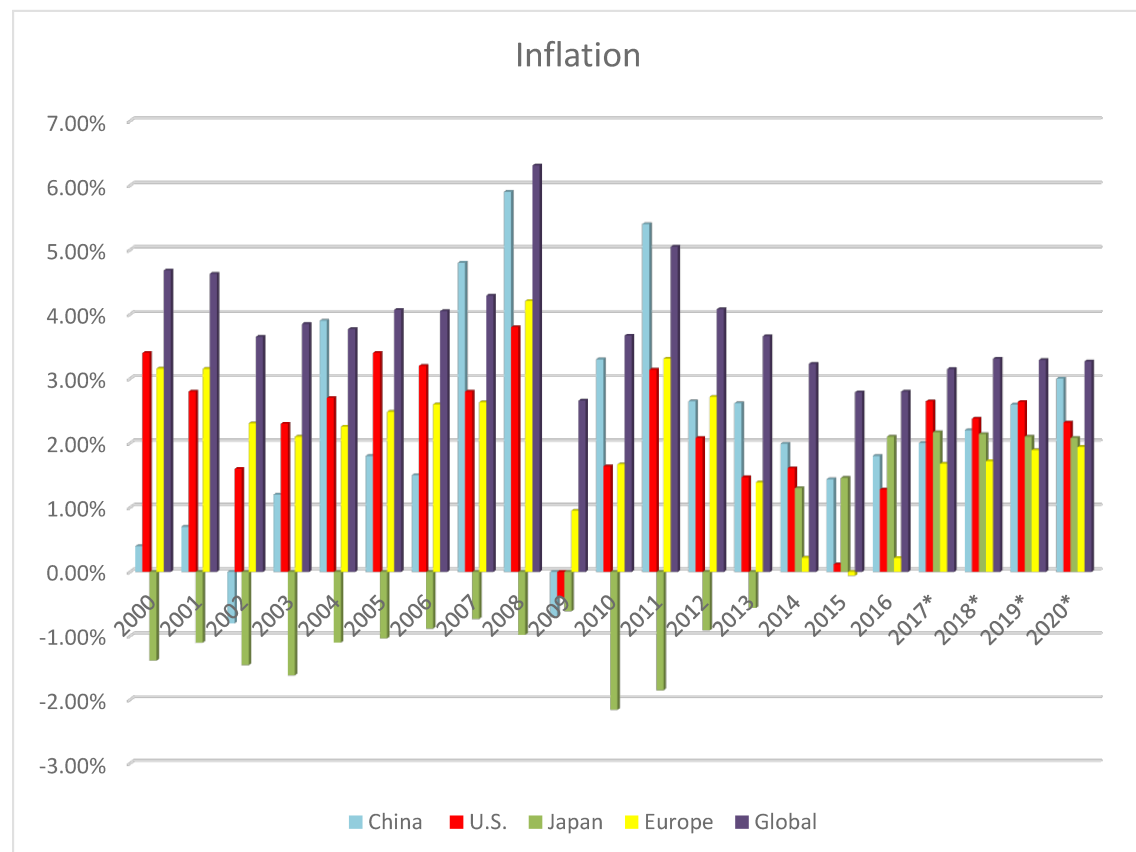


Source: <https://www.statista.com/statistics>, author

We can see the GDP in China was the lowest at the beginning, but it was increased

continuously later. The GDP in Japan was not growth a lot during the past 16 years, and sometimes it was decreased. U.S don't have problem about the growth of GDP except in 2009. And the trend of GDP for Europe market and Global market are almost the same.

Chart 5.2 Inflation rate for each market from 2000 to 2020



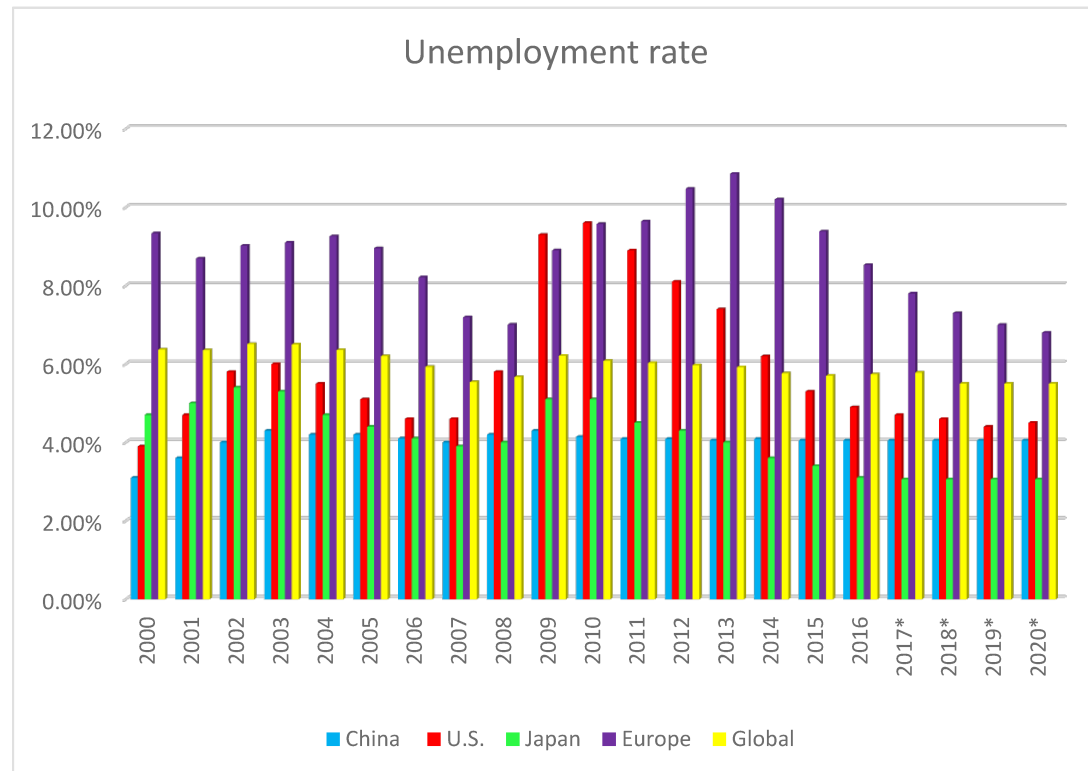
Source: <http://www.imf.org/en/data> and <https://data.worldbank.org>, author

It is not hard to see that Japan really has the problem with inflation rate before 2014. The inflation rate in China was high in 2007, 2008 and 2011, in recent years, it was in a normal level. For the United States, the highest inflation rate was still lower than 4%, that was a good situation. Europe also don't have much pressures on inflation rate, and the inflation rate in Global market was a little high before 2012, now it was in the normal level.

From Chart 5.3 we can see that the unemployment rate in Europe was really higher than other market. And China don't have problem in unemployment rate in the past 16 years. Japan also did well in unemployment rate, and from 2009 to 2013, the

unemployment rate in U.S. was a little high, but now it was solved.

Chart 5.3 Unemployment rate for each market from 2000 to 2020



Source: <http://www.imf.org/en/data> and <https://data.worldbank.org>, author

From these three Charts, we can make the summary that the economic environment in Japan is not very good, it has the problems with the growth of GDP, and the inflation rate stability.

The economic environment in China is not perfect from 2007 to 2011, because of the high inflation rate, but now it was decreased to the normal level.

And for U.S and Europe, their economic environment is good, but they all have the pressure of high unemployment rare.

For the Global economic environment, it was good except year 2008 and 2009 because of the Global financial crisis.

5.2 History of Collective Investment

The length of history of collective investment in different market is not the same; we make Table 5.1 to show the length of history for each market.

Tab. 5.1 Length of history

Market	China	U.S.	Japan	Europe	Global
Beginning	1987	1900s	1905	1868	1868

From this table we can see the oldest collective investment market is Europe market; U.S. and Japan also have a long history of collective investment; the shortest market is Chinese market.

There are some common points of the history of collective investment in these markets. The first one is that all of the operating direction of these market was from domestic operating to international operating. The second one is that they all suffered a stage that in this stage the regulation and supervision of collective investment market was not completed. And the third one is they all tried to create the new collective investment product in the market.

For Chinese market, because the history of its collective investment market is not long. So, things like laws, regulations, clear definition of collective investment were not completed in Chinese market. Therefore, the main contents of its history are completing the market. For Japanese market, the main changes between the different history stage is the operating mode. For the European market, the main changes between the different history stages are more countries took part in this market and various types of funds were created. For the U.S. market, one of the important change is the closed-end fund was not popular again, meanwhile open-end fund got a large proportion of the whole market.

And for the Global market, one important development is more developing countries such as China are focus on the collective investment industry.

5.3 Laws of Collective Investment

Although the published time and name of the laws from one market are different with the laws from other market, they have some similar points with each other about the purposes of the laws.

These laws are focus on the portfolio structure of investment products, the operation and management of the investment funds, the selling of the investment funds, the classification of investment funds and so on.

There is one special law in Chinese market, it is “*Incentive measures for product innovation of securities investment fund*”. This law is focus on the innovation of securities investment fund. From this law we can see that the development of collective investment fund in China is quickly, because they need the new products to improve the market.

Some of the laws in Japan and the United States are the same. Such as “*Securities Exchange Act*” is used in both markets. And the “*Securities Investment Advisory Business Management Law*” in Japan are similar as “*Investment Advisers Act*” in The United States.

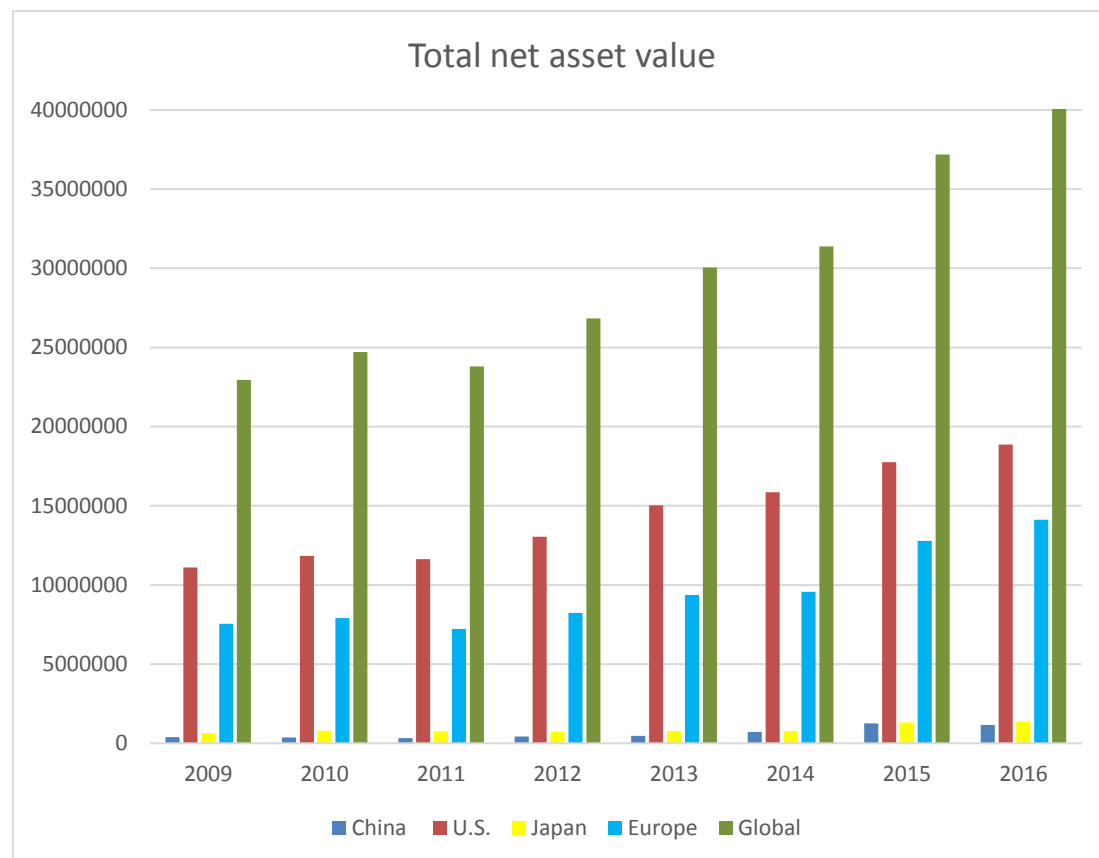
And the laws about “*Undertakings for Collective Investment in Transferable Securities*” in European market are very completed, and they really pay attention to it. The laws have set up the requirements of UCITS’s investment target, the management of UCITS and the investment of it.

5.4 Total Size of Collective Investment

We use the total net asset value of the collective investment funds to represent the total size of the whole market. Here, we make Chart 5.4 to compare the total size of collective investment funds in each market.

We can see that the total net assets value of collective investment funds in the United States is usually around 50% of the Global market. And the total net asset value of collective investment funds in European market is about 30% of the Global market. It is very clear that the United States is the biggest market in the collective investment industry, and the second biggest market is European market.

Chart 5.4 Total size of collective investment funds from 2009 to 2016



Source: China Securities Investment Fund Annual Report 2016, author

The total net asset value of collective investment funds in China and Japan are not high especially when compare with American market and European market.

5.5 Structure of Collective Investment

From the results in chapter 4, we can see only in European market and Global market, there exist value-added fund and real estate fund. And all the other markets except Japanese market have stock fund, bond fund, commingled fund, monetary market fund and other fund. Japanese market only has stock fund, bond fund and commingled fund.

We make Table. 5.2 to show the Structure of the collective investment funds in different market.

From Table 5.2, we can see that the largest type of collective investment funds in China is monetary market fund; in U.S. is stock fund; in Japan is stock fund; in Europe is also stock fund; and in Global is stock fund. We can make the conclusion that

the Structure of collective investment funds are almost the same in these market except Chinese market.

Tab. 5.2 Structure of collective investment funds in different markets

	China	U.S.	Japan	Europe	Global
Stock fund	8.280%	56.216%	89.602%	30.755%	41.911%
Bond fund	16.702%	21.606%	10.359%	26.655%	22.282%
Commingled fund	23.566%	7.386%	0.038%	21.418%	13.406%
Monetary market fund	50.251%	14.459%	0	0.01%	12.659
Value added fund	0	0	0	0.509%	0.175%
Real estate fund	0	0	0	4.161%	1.471%
Others fund	1.201%	0.333%	0	16.491%	8.097%

5.6 Prediction of Collective Investment

In this part, we will use regression model and the forecast macroeconomics variables to predict the contemporary trend of collective investment industry in each market.

Chinese market

Based on formula (2.2), formula (2.3), formula (2.4), formula (2.5) which we have mentioned in chapter 2, and the data of Chinese economic factors, we get the results of regression analysis in Excel. The results are showing in Chart 5.5.

Chart 5.5 Results of regression analysis in China

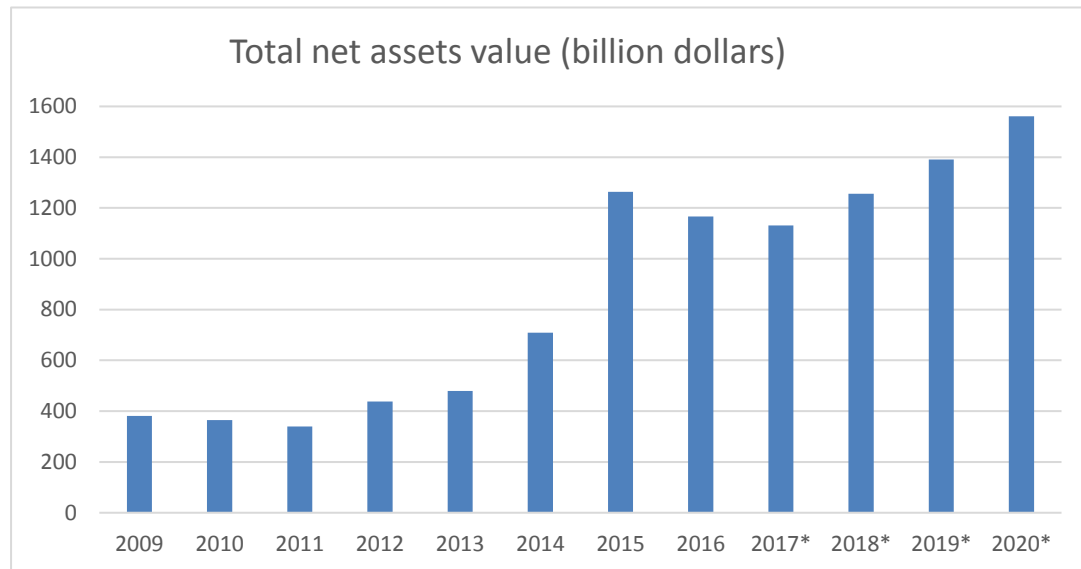
<i>Regression Statistics</i>		<i>Coefficients</i>	
Multiple R	0.971586645	Intercept	0
R Square	0.943980609	GDP (billion dollars)	0.129802036
Adjusted R Square	0.721572853	inflation	-7441.72437
Standard Error	218.8568006	unemployment	-7694.26473
Observations	8		

From Chart 5.5 we can see the R square is 0.944, that means this model is excellent, the relationship between these four variables is deep. And the function of the regression model for Chinese market is shown as following:

$$\begin{aligned} \text{Total net assets value} = & 0.1298 * \text{GDP} - 7441.72 * \text{inflation} \\ & - 7694.26 * \text{unemployment rate} \end{aligned} \quad (5.1)$$

We make Chart 5.6 to show the trend of collective investment market in China from 2017 to 2020.

Chart 5.6 Contemporary trend of Chinese collective investment market



From Chart 5.6 we can see, from 2016 to 2017 the total net assets value of collective investment funds in China will decrease. Later, from 2017 to 2020, the total net assets value will increase continuously.

U.S. market

By use formula (2.2), formula (2.3), formula (2.4), formula (2.5) which are written in chapter 2, and the data of American economic factors, we get the results of regression analysis in Excel. The results are showing in Chart 5.7.

Chart 5.7 Results of regression analysis in U.S

<i>Regression Statistics</i>		<i>Coefficients</i>	
Multiple R	0.999686	Intercept	0
R Square	0.999373	GDP (billion dollar	1.170662
Adjusted R Square	0.799122	inflation	-27689.1
Standard Error	464.151	unemployment	-60784.7
Observations	8		

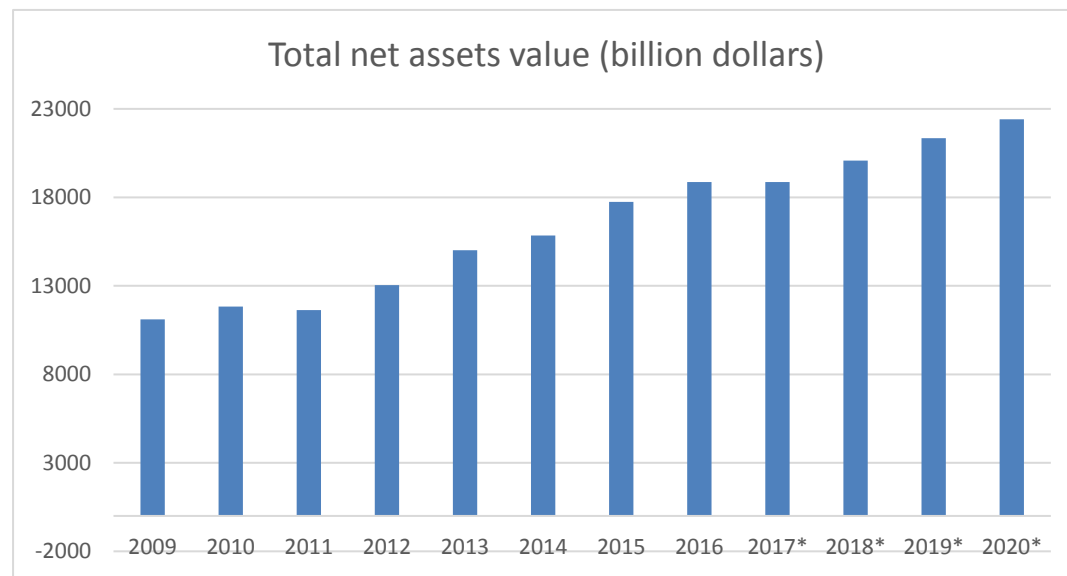
From Chart 5.7, we can see the R square is 0.999, that is really a high value of R square, that means it is an excellent model. And the total net assets value of collective

investment fund in American do has the relationship with its economic factors. The formula of this model represents as following:

$$\begin{aligned} \text{Total net assets value} = & 1.1706 * \text{GDP} - 27689.1 * \text{inflation} \\ & - 60784.7 * \text{unemployment rate} \end{aligned} \quad (5.2)$$

We make Chart 5.8 to show the trend of collective investment market in U.S. from 2017 to 2020.

Chart 5.8 Contemporary trend of American collective investment market



From Chart 5.8 we can see the total net assets value of collective investment funds in U.S. will reduce just a little in 2017. And then it will increase from 2018 to 2020.

Japanese market

We use formula (2.2), formula (2.3), formula (2.4), formula (2.5) that we have mentioned in chapter 2 and the Japanese economic data to make regression analysis, results are showing in Chart 5.9.

Chart 5.9 Results of regression analysis in Japan

<i>Regression Statistics</i>		<i>Coefficients</i>	
Multiple R	0.700774408	Intercept	0
R Square	0.491084771	GDP (billion dollars)	222.786768
Adjusted R Square	0.087518679	inflation	15054650.25
Standard Error	442204.8128	unemployment	-23828324.8
Observations	8		

From Chart 5.9 we can the value of R square is only 0.492, that not a good value of R square. And it refers that this is a bad regression model. And if we use this model for forecasting, the results will be inaccuracy. In our opinion, the reason are the deflation problem and unstable gross domestic product in Japan. And the formula of the regression model in Japanese market is shown as following:

$$\begin{aligned} \text{Total net assets value} = & 222.79 * \text{GDP} + 15054650.25 * \text{inflation rate} \\ & - 23828324.8 * \text{unemployment rate} \end{aligned} \quad (5.3)$$

Because the regression model of Japanese market is a bad model, we can't use this model for forecasting, that doesn't make sense.

European market

Formula (2.2), formula (2.3), formula (2.4), formula (2.5) which we have mentioned in chapter 2 are used for calculating the regression model here. Results are represented in Chart 5.10.

Chart 5.10 Results of regression analysis in European market

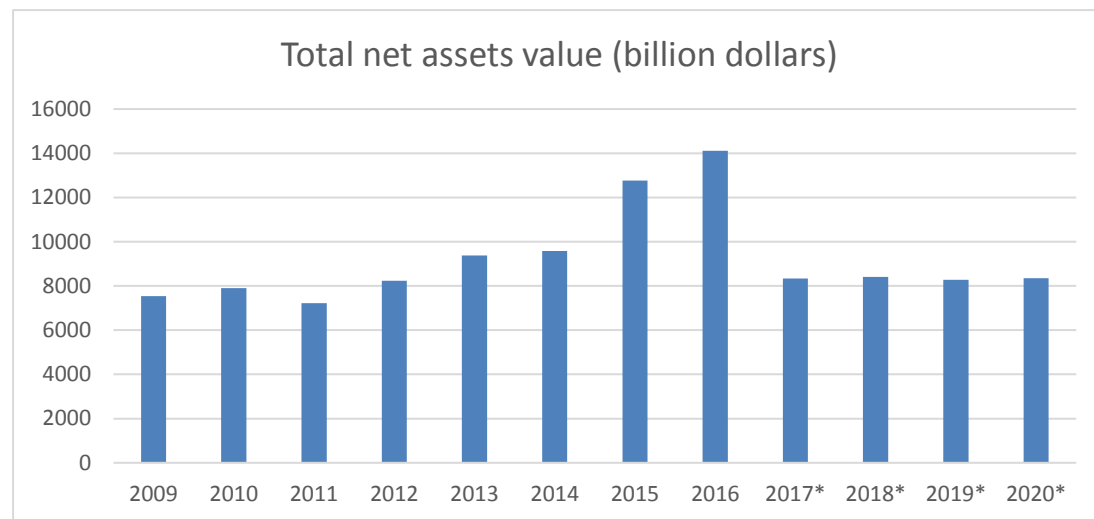
<i>Regression Statistics</i>		<i>Coefficients</i>	
Multiple R	0.981532348	Intercept	0
R Square	0.96340575	GDP (billion dollar	0.592847874
Adjusted R Square	0.748768049	inflation	-164669.6128
Standard Error	2391.264291	unemployment	14066.86201
Observations	8		

From this Chart, we can see the R square is equal to 0.96, it means this model is excellent model. And the relationship is deep with each other. The formula of this model is showing as following:

$$\begin{aligned} \text{Total net assets value} = & 0.5928 * \text{GDP} - 164669.61 * \text{inflation rate} \\ & + 14066.86 * \text{unemployment rate} \end{aligned} \quad (5.4)$$

We make Chart 5.11 to show the trend of collective investment market in Europe from 2017 to 2020.

Chart 5.11 Contemporary trend of European collective investment market



It is not hard to see that the total net assets value of collective investment funds in European market will decrease a lot from 2016 to 2017. And then it will keep in stable level.

From formula (5.4) we can see that the unemployment rate has the positive relationship with the total net assets value, the inflation rate has the negative relationship with it. From chapter 4 we know that from 2016 to 2017, the unemployment will be decreased, and the inflation rate will be increased. That the reason why the trend of total net assets value of collective investment funds in Europe is decreasing.

However, there may be has other reason of the decreasing trend. When we set up the regression model, we use the data from 2009 to 2016. But during that period, the economic in Europe is not stable. Therefor the regression model for European market may be is not a normal model if in the stable economic environment.

Global market

We use formula (2.2), formula (2.3), formula (2.4), formula (2.5) which we have written in chapter 2 and the data of Global economic factors to make the regression analysis. Results are shown in Chart 5.12.

Chart 5.12 Results of regression analysis in Global

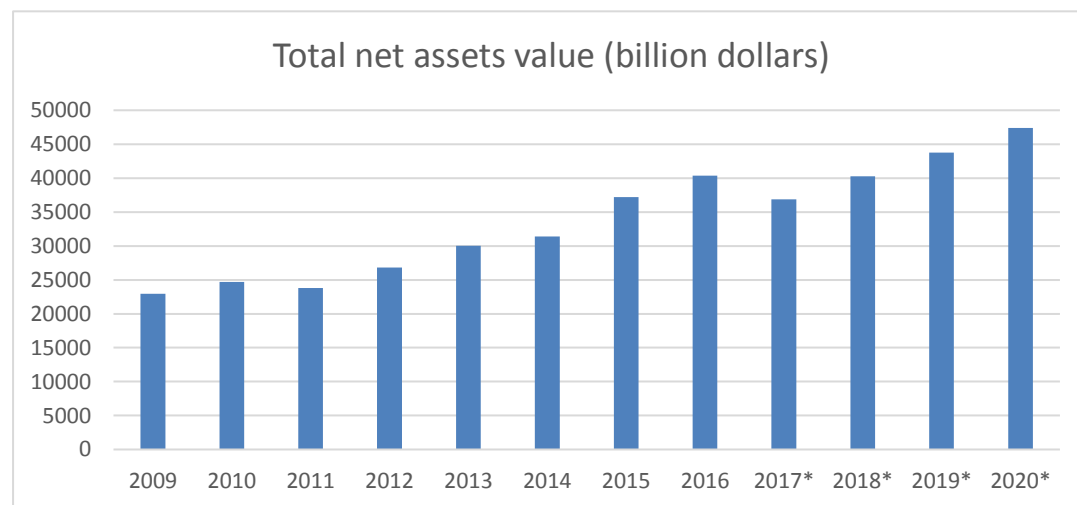
Regression Statistics		Coefficients	
Multiple R	0.995986849	Intercept	0
R Square	0.991989804	GDP (billion dollars)	0.759961921
Adjusted R Square	0.788785726	inflation	-518127.254
Standard Error	3425.315575	unemployment	-121923.917
Observations	8		

From Chart 5.12, we can see the R square is equal to 0.992, therefore it is a excellent model. The relationship between these variables are closed. The formula of this model is represented as following:

$$\begin{aligned} \text{Total net assets value} = & 0.76 * \text{GDP} - 518127.25 * \text{inflation rate} \\ & - 121923.92 * \text{unemployment rate} \end{aligned} \quad (5.5)$$

We make Chart 5.13 to show the trend of collective investment market in Global from 2017 to 2020.

Chart 5.13 Contemporary trend of Global collective investment market



We can see from 2016 to 2017, the total net assets value of collective investment funds in the Global market will decrease, and from 2017 to 2018, it will increase, but the value is still lower than in 2016. From 2018 to 2020, it will increase continuously.

The main reason of the decreasing in 2017 is the higher inflation rate. High inflation rate let the investors reduce their demand of collective investment funds.

5.7 Suggestion for Each Market

We have assessed the collective investment industry from lots of field for different markets, in this part we will write our suggestion for each market.

For *Chinese market*, by comparing with other markets, Chinese collective investment market is not completed. There are still some problems about the regulation and supervision. So Chinese market need to establish more uniform laws and requirements to regulate the market. Because if the requirements and rules are not the same in the whole market, that will affect the fairness of competition. What is good for the development of collective investment in China is that the macroeconomic environment in China is good. It has a stable and rapid growth.

For *U.S. market*, the laws and requirements for collective investment industry is completed. The whole collective investment industry in the United States has a rounded system. There not a big problem for U.S. market. In our opinion, if they want to improve their collective investment market, they can focus on the innovation of new products or how to attract more other types of investors.

For *Japanese market*, there are some problems in this market. But not because of the market itself, it is because of the domestic macroeconomic environment. The Japanese market has a long history of collective investment industry. Their laws are completed, and their operating mode is also good after several times adjustment. The biggest problem for the collective investment industry in Japan is the unstable economic in Japan.

For *European market*, as the longest collective investment market, the regulation system and laws are also complete. However, there are still some field can be improved in this market. There are lots of countries in this market, they have their own operating mode, selling channels, types of funds and so on. The European market can focus on make deeper relationship between these individual countries, let them take more international trading with others. And the macroeconomic environment in Europe is also not stable during the past 16 years, that is not a good situation for the collective investment's developing.

For the *Global market*, the trend of its development is not bad during these years. As we have written before, U.S. and Europe have a big proportion of market shares in

the Global market. Therefor the development of U.S. market and European market are important for Global market. And if the Global market focus on attract more developing countries to take part in this market, it will have a great growth of the market.

6 Conclusion

Collective investment has become an important part of the financial products industry. Make the assessment of different collective investment markets can tell us how to develop collective investment in a better way.

The objective of this thesis was to assess the performance of collective investment in the Chinese market and other selected markets and summarize their differences and common points. As selected markets, we have selected representative markets; they are American markets, Japanese markets, European markets, and global markets.

This thesis was divided into six chapters. Chapter 1 was the introduction, in that chapter we wrote the basic information about the whole thesis.

Chapter 2 was written about characteristics of collective investment. In that chapter we wrote the classification of collective investment, functions of collective investment, development trend of collective investment, risk of collective investment and method for assessment of collective investment.

Chapter 3 and Chapter 4 focused on the development of collective investment in Chinese market, American market, Japanese market, European market, and Global market. In those two chapters, we wrote the basic information about macroeconomics environment and collective investment industry for these markets.

Chapter 5 was the important part of this thesis, in this chapter we wrote the assessment of collective investment in different market. We made the prediction of the trend of development by using regression analysis, and finally we gave our suggestions to each market.

Chapter 6 was conclusion, in this part we reviewed this thesis and made the summary of the whole thesis.

From our assessment, we can make the conclusion that collective investment will have a good development under the stable or growth economics.

Bibliography

- [A] BOGLE, John C. *Common Sense on Mutual Funds*. 10th ed. Hoboken, N. J.: Wiley, 2010. ISBN 978-0-47-0138137.
- [B] CECCHETTI, G. Stephen and Kermit, L. SCHOENHOLTZ. *Money, Banking, and Financial Markets*. 3rd ed. New York: MacGraw-Hill, 2011. ISBN 978-0-07-122068-2.
- [C] FABOZZI, J. Frank and Franco MODIGLIANI. *Capital Markets*. 4th ed. New Jersey: Pearson Prentice Hall, 2009. ISBN 978-0-13-715499-9.
- [D] Investment Company Institute Research Staff. *2017 Investment Company Fact Book. A Review of Trends and Activities in The Investment Company Industry*. The Investment Company Institute, 2017, 57th ed. ISBN: 1-878731-62-9.
- [E] IOSCO, *Principles for the Regulation of Collective Investment Schemes and Explanatory Memorandum*, 1994.
- [F] Shi JingLei, and Wang XuSong. *The Development of Japan's Trust Industry and Its Enlightenment to China*. ShanXi Finance and Economics University, 2002. ISBN: 1007-9556(2002) 01-0084-03.
- [G] Wei XueFeng. *Research on the influencing factors of the development of European mutual fund industry*. 2012. Fudan University, Faculty of Economic.
- [H] Wharton class six. *U.S. Mutual Fund Industry Development*. 2010. Chinese Securities.
- [I] Xiao Bailing. *Chinese financial institutions collective investment products and regulatory system research*. 2012. ISBN: 0189
- [G] Yong Wang. *Investment Funds Research*. 1999. SWUFE, Faculty of Finance.
- [K] Zei He. *A Theoretical Discussion on the Development and Improvement of China's Investment Funds*. 1999. SWUFE, Faculty of Finance.

Economic bibliography

[L] International Investment Fund Research:

<https://wenku.baidu.com/view/dd3713ff770bf78a65295412.html?from=search>

[M] Macroeconomics variables:

<https://www.statista.com/statistics>

[N] Macroeconomics variables:

<http://www.imf.org/en/data>

[O] Macroeconomics variables:

<https://data.worldbank.org>

[P] China Securities Investment Fund Annual Report 2016:

<http://www.amac.org.cn/cms/contentcore/resource/download?ID=7390>

[Q] ICI Investment Company Fact Book 2016:

https://www.ici.org/pdf/2016_factbook.pdf

List of Abbreviations

GDP	Gross domestic product
PBC	The People's Bank of China
UCITS	Undertakings for Collective Investment in Transferable Securities
EC	European Community
ICI	Investment company institute
WEO	World Economic Outlook

Declaration of Utilization of Results from the Diploma Thesis

Herewith I declare that

I am informed that Act No. 121/2000 Coll. – the Copyright Act, in particular, Section 35 – Utilisation of the Work as a Part of Civil and Religious Ceremonies, as a Part of School Performances and the Utilisation of a School Work – and Section 60 – School Work, fully applies to my diploma thesis;

I take account of the VSB – Technical University of Ostrava (hereinafter as VSB-TUO) having the right to utilize the diploma thesis (under Section 35(3)) unprofitably and for own use;

I agree that the diploma thesis shall be archived in the electronic form in VSB-TUO's Central Library and one copy shall be kept by the supervisor of the diploma thesis. I agree that the bibliographic information about the diploma thesis shall be published in VSB-TUO's information system;

It was agreed that, in case of VSB-TUO's interest, I shall enter into a license agreement with VSB-TUO, granting the authorization to utilize the work in the scope of Section 12(4) of the Copyright Act;

It was agreed that I may utilize my work, the diploma thesis or provide a license to utilize it only with the consent of VSB-TUO, which is entitled, in such a case, to claim an adequate contribution from me to cover the cost expended by VSB-TUO for producing the work (up to its real amount).

Ostrava dated 25.04.2018

Bivei Guan 

Student's name and surname

List of Annexes

Annex 1: The list of countries in European market.

Annex 2: Macroeconomic variables in China.

Annex 3: Macroeconomic variables in U.S.

Annex 4: Macroeconomic variables in Japan

Annex 5: Macroeconomic variables in Europe

Annex 6: Macroeconomic variables in Global

Annex 7: Total net assets value of collective investment funds

Annex 8: Structure of collective investment funds.

Annexes 1 The list of countries in European market.

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark

Finland

France

Germany

Greece

Hungary

Ireland

Italy

Liechtenstein

Luxembourg

Malta

Netherlands

Norway

Poland

Portugal

Romania

Russia

Slovakia

Spain

Sweden

Turkey

United Kingdom

Annex 2 Macroeconomic variables in China.

	GDP (billion dollars)	Inflation	Unemployment
2000	1211.35	0.40%	3.10%
2001	1339.40	0.70%	3.60%
2002	1470.55	-0.80%	4.00%
2003	1660.29	1.20%	4.30%
2004	1955.35	3.90%	4.20%
2005	2285.97	1.80%	4.20%
2006	2752.13	1.50%	4.10%
2007	3552.18	4.80%	4.00%
2008	4598.21	5.90%	4.20%
2009	5109.95	-0.70%	4.30%
2010	6100.62	3.30%	4.14%
2011	7572.55	5.40%	4.09%
2012	8560.55	2.65%	4.09%
2013	9607.23	2.62%	4.05%
2014	10482.37	1.99%	4.09%
2015	11064.67	1.44%	4.05%
2016	11199.15	1.80%	4.05%
2017*	12263.43	2.00%	4.05%
2018*	13338.23	2.20%	4.05%
2019*	14605.29	2.60%	4.05%
2020*	16144.04	3.00%	4.05%

Sources: <https://www.statista.com/statistics>

<http://www.imf.org/en/data>

<https://data.worldbank.org>

Annex 3 Macroeconomic variables in U.S.

	GDP (billion dollars)	Inflation	Unemployment
2000	10284.78	3.40%	3.9%
2001	10621.82	2.80%	4.7%
2002	10977.51	1.60%	5.8%
2003	11510.67	2.30%	6.0%
2004	12274.93	2.70%	5.5%
2005	13093.73	3.40%	5.1%
2006	13855.89	3.20%	4.6%
2007	14477.64	2.80%	4.6%
2008	14718.58	3.80%	5.8%
2009	14418.74	-0.40%	9.3%
2010	14964.37	1.64%	9.6%
2011	15517.93	3.14%	8.9%
2012	16155.26	2.08%	8.1%
2013	16691.52	1.47%	7.4%
2014	17427.61	1.61%	6.2%
2015	18120.71	0.12%	5.3%
2016	18624.48	1.28%	4.9%
2017*	19178	2.65%	4.7%
2018*	20103	2.38%	4.6%
2019*	21136	2.64%	4.4%
2020*	22034	2.32%	4.5%

Sources: <https://www.statista.com/statistics>

<http://www.imf.org/en/data>

<https://data.worldbank.org>

Annex 4 Macroeconomic variables in Japan.

	GDP (billion dollars)	Inflation	Unemployment
2000	4887.52	-1.384%	4.700%
2001	4303.54	-1.104%	5.000%
2002	4115.12	-1.458%	5.400%
2003	4445.66	-1.617%	5.300%
2004	4815.15	-1.101%	4.700%
2005	4755.41	-1.038%	4.400%
2006	4530.38	-0.883%	4.100%
2007	4515.26	-0.730%	3.900%
2008	5037.91	-0.981%	4.000%
2009	5231.38	-0.611%	5.100%
2010	5700.10	-2.160%	5.100%
2011	6157.46	-1.850%	4.500%
2012	6203.21	-0.910%	4.300%
2013	5155.72	-0.560%	4.000%
2014	4850.41	1.300%	3.600%
2015	4394.98	1.460%	3.400%
2016	4949.27	2.100%	3.100%
2017*	5011.14	2.170%	3.060%
2018*	5040.70	2.140%	3.060%
2019*	5083.55	2.100%	3.060%
2020*	5094.22	2.080%	3.060%

Sources: <https://www.statista.com/statistics>

<http://www.imf.org/en/data>

<https://data.worldbank.org>

Annex 5 Macroeconomic variables in Europe.

	GDP (billion dollars)	Inflation	Unemployment
2000	8912.44	3.157%	9.336%
2001	9009.86	3.152%	8.691%
2002	9822.71	2.307%	9.019%
2003	11957.24	2.100%	9.098%
2004	13806.71	2.256%	9.260%
2005	14441.22	2.484%	8.953%
2006	15405.42	2.602%	8.213%
2007	17795.83	2.634%	7.193%
2008	19136.67	4.205%	7.006%
2009	17101.46	0.950%	8.901%
2010	16992.73	1.670%	9.574%
2011	18352.58	3.310%	9.639%
2012	17290.20	2.719%	10.472%
2013	18026.77	1.388%	10.855%
2014	18632.31	0.221%	10.202%
2015	16411.32	-0.059%	9.382%
2016	16491.32	0.217%	8.527%
2017*	16877.22	1.680%	7.800%
2018*	17228.26	1.720%	7.300%
2019*	17545.26	1.890%	7.000%
2020*	17864.59	1.940%	6.800%

Sources: <https://www.statista.com/statistics>

<http://www.imf.org/en/data>

<https://data.worldbank.org>

Annex 6 Macroeconomic variables in Global.

	GDP (billion dollars)	Inflation	Unemployment
2000	33823.08	4.680%	6.369%
2001	33579.21	4.630%	6.352%
2002	34711.51	3.650%	6.512%
2003	38985.49	3.850%	6.502%
2004	43887.80	3.770%	6.355%
2005	47539.23	4.070%	6.201%
2006	51465.81	4.050%	5.928%
2007	58059.69	4.290%	5.542%
2008	63649.97	6.310%	5.668%
2009	60280.21	2.660%	6.211%
2010	65906.43	3.670%	6.082%
2011	73119.33	5.050%	6.029%
2012	74488.51	4.080%	5.971%
2013	76551.27	3.660%	5.920%
2014	78594.42	3.230%	5.764%
2015	74311.46	2.790%	5.702%
2016	75367.75	2.800%	5.739%
2017*	79280.94	3.150%	5.780%
2018*	84374.78	3.310%	5.500%
2019*	88848.79	3.290%	5.500%
2020*	93496.30	3.270%	5.500%

Sources: <https://www.statista.com/statistics>

<http://www.imf.org/en/data>

<https://data.worldbank.org>

Annex 7 Total net assets value of collective investment funds.

	China	U.S.	Japan	Europe	Global
2009	381207	11112674	660666	7545535	22945327
2010	364985	11831334	785504	7903389	24709854
2011	339037	11626493	745383	7220298	23795808
2012	437449	13043666	738488	8230559	26835850
2013	479957	15017682	774126	9374830	30049934
2014	708884	15852341	780363	9576475	31381425
2015	1263130	17752399	1328634	12772328	37190528
2016	1167022	18868105	1386070	14116938	40364115

Source: China Securities Investment Fund Annual Report 2016

Annex 8 Structure of collective investment funds.

	China	U.S.	Japan	Europe	Global
Stock fund	101641	10606920	1307927	3931761	66684000
Bond fund	205026	4076660	151218	3407599	35453000
Commingled fund	289276	1393610	560	2738062	21331000
Monetary market fund	616853	2728137	0	1334.323	20141000
Value added fund	0	0	0	65117	278000
Real estate fund	0	0	0	531932	2340000
Others fund	14744	62777	0	2108143	12883000

Source: China Securities Investment Fund Annual Report 2016